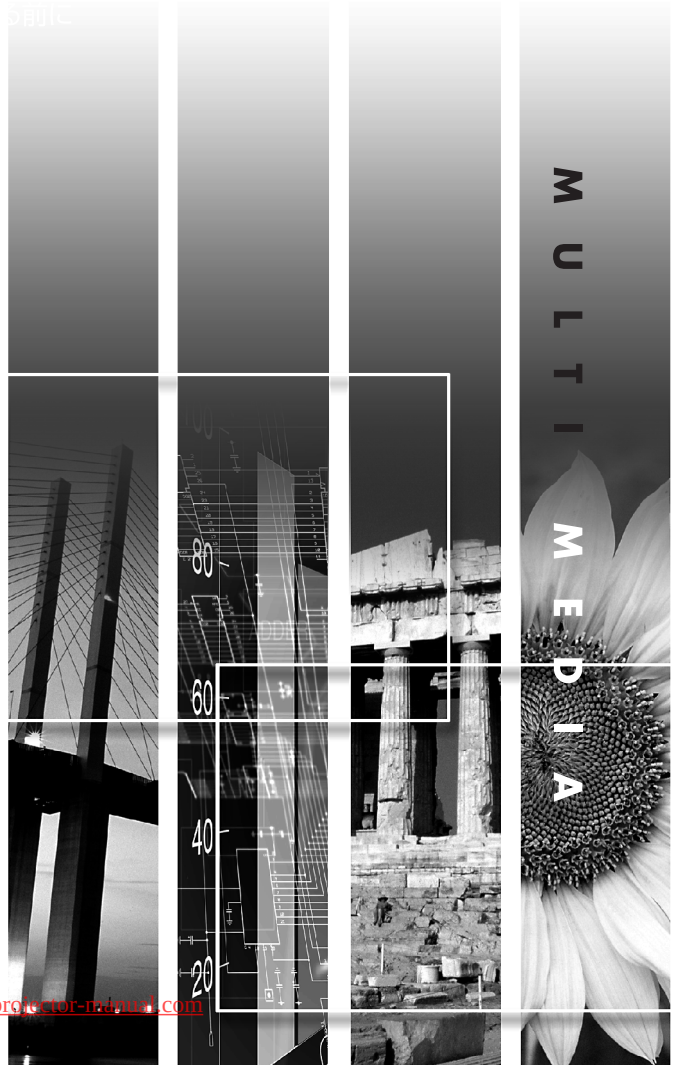
EPSON®

MULTIMEDIA PROJECTOR

User's Guide

EMP-810
EMP-800
EMP-600



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About The Manuals and Notations Used

◆ Types of Manual

The documentation for your EPSON projector is divided into the following three manuals. The manuals cover the following topics.

- User's Guide (this manual)
  This Users Guide contains information on installing the projector, basic operation, using the projector menus, troubleshooting and maintenance.
- Safety Instructions/World-Wide Warranty Terms
  This manual contains information on using the projector safely, and also includes World-Wide Warranty Terms and a Troubleshooting check sheet.
  Be sure to read this manual thoroughly before using the projector.
- Quick Reference Guide
  Contains an overview of the most commonly-used projector functions for easy reference. You should keep this Quick Reference Guide near the projector at all times and refer to it before starting presentations and while using the projector in order to check details of operation.

◆ Notations used in this Users Guide

General information

Caution :	Indicates procedures which may result in damage or injury if sufficient care is not taken.
Tip :	Indicates additional information and points which may be useful to know regarding a topic.
⏩	Indicates that an explanation of the underlined word or words in front of this symbol appears in the Glossary of Terms. Refer to the Glossary in the Appendix. (P.101)
Procedure	Indicates operating methods and the order of operations. The procedure indicated should be carried out in the order of the numbers.

Meaning of "unit" and "projector"

When "unit" or "projector" appears in the text of this Users Guide, they may refer to items which are accessories or optional equipment in addition to the main projector unit itself.

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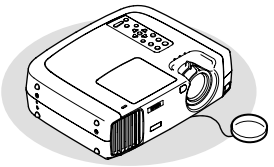
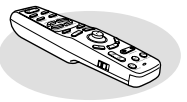
Unpacking the Projector

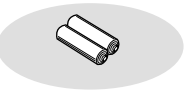
When you unpack the projector, make sure that you have all these components. If any of the components are missing or incorrect, please contact the place of purchase.



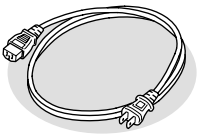
☐Projector
(with lens cover attached by a cord) At the time of purchase, there is packing attached to the rear adjustable foot. Remove this packing before using the projector.



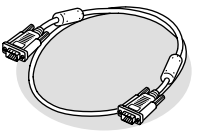
☐Remote control



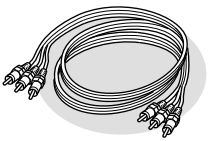
☐2 AA manganese batteries
(for the remote control)



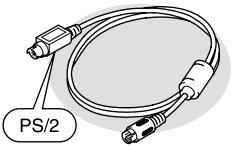
☐Power cord
(9.8 ft (3 m))
For connecting the projector to a wall outlet



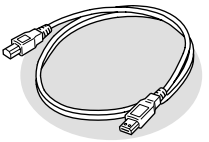
☐Computer cable
(mini D-SUB 15-pin / mini D-Sub 15-pin 6 ft (1.8 m))
For connecting the projector to a computer



☐Audio/Video (A/V) cable
(red/white/yellow 6 ft (1.8 m))
For connecting the projector to a video component



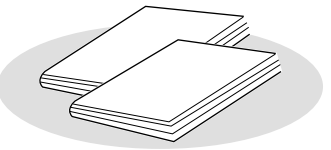
☐PS/2 mouse cable
(6 ft (1.8 m))
For connecting to a computer with a PS/2 mouse port in order to use the wireless mouse function



☐USB cable
(6 ft (1.8 m))
For connecting to a computer with a USB port

Documentation

☐Safety Instructions/
World-Wide Warranty Terms
☐User's Guide (this manual)
☐Quick Reference Guide



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Features of the Projector

Horizontal and vertical keystone correction function

Keystone distortion in the projected image can be easily corrected, not only vertically but horizontally also.
This allows even images which have been captured from a sideways angle to be projected correctly. (P. 44)

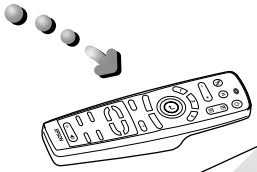
Color mode function

The optimum images can be projected simply by selecting the image quality from the following six pre-recorded settings according to the projection environment being used. (P. 63, 66)

- sRGB
- Normal
- Meeting
- Presentation
- Theater
- Amusement

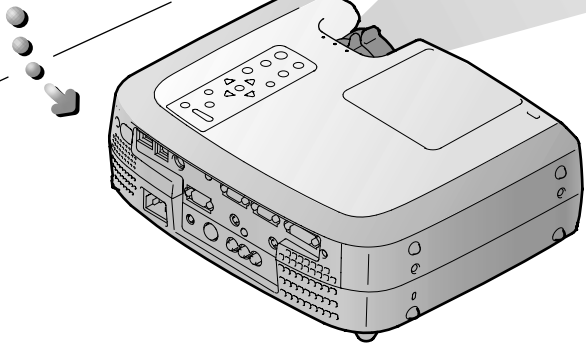
Easy to Operate

The accessory remote control can be used for operations such as pausing projection (See "Freeze" on page 54) and zooming in on important areas of an image (See "E-Zoom" on page 56). In addition, the remote control can be used to move the pointer around on the computer screen during projection, to carry out operations such as moving to the next page to be projected.
(See "Using the Remote Control to Operate the Mouse Pointer" on page 25.)
If using the wireless mouse function with a USB connection you can use the remote control to display the next page or previous page when giving a presentation using PowerPoint documents.



Compact and lightweight

The projector has a compact body with a footprint the size of an A4 page (10.79 (D) x 13.7 (W) x 4.09 (H) inches) and is light in weight (approximately 9.3 lbs (4.2kg)).



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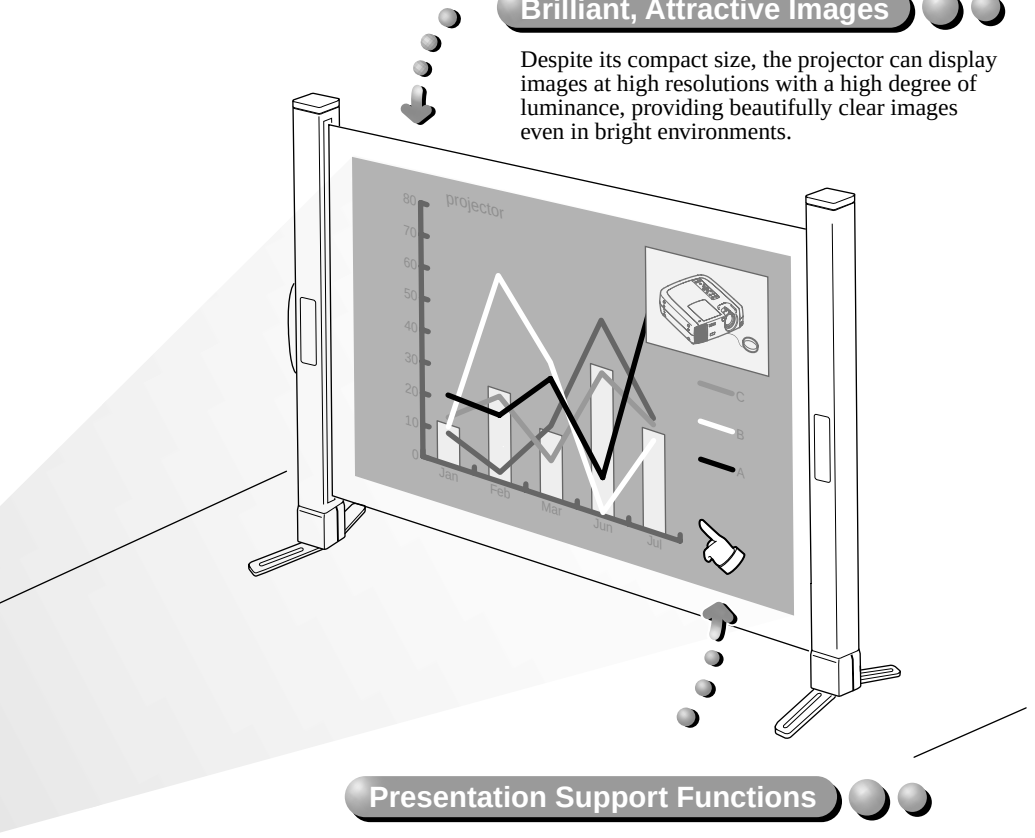
Brilliant, Attractive Images

Despite its compact size, the projector can display images at high resolutions with a high degree of luminance, providing beautifully clear images even in bright environments.



Presentation Support Functions

Effect options such as indicating important points using a pointer, positioning stamps and drawing lines can be used to provide effective support for presentations. (P. 58)

Picture-in-Picture Function

Computer images and VCR images can be played back and projected simultaneously on a single screen. A sub-screen appearing on the main computer screen can show moving images from a VCR, thereby increasing the power of your presentation. (P. 60)

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Before Using the Projector

This chapter describes the procedures for setting up the projector before use.

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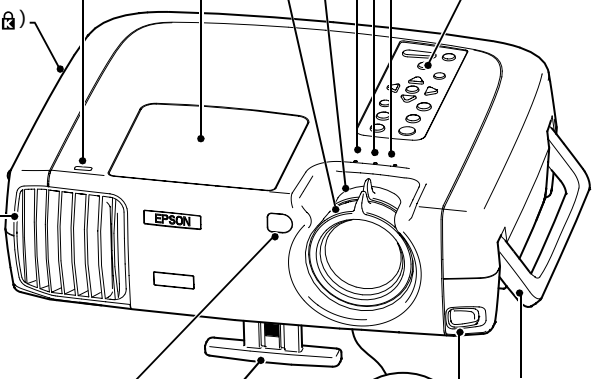
Part Names and Functions

Front/Top



- Zoom ring (P.41)
  Adjusts the image size.
- Focus ring (P.46)
  Adjusts the image focus.
- Lamp cover (P.94)
  Open this cover when replacing the lamp unit inside the projector.
- Lamp cover opening switch (P.94)
  Slide this switch to unlock the lamp cover when removing it.
- Security lock ( ) (P.102)
- Air exhaust vent
- Remote control receiver (P.14)
  Receives signals from the remote control.
- Front adjustable foot (P.42)
  Extend and retract to adjust the projection angle.
- Lens cover
  Attach when not using the projector to prevent the lens from becoming dirty or damaged.
- Temperature indicator (P.80)
  Indicates abnormalities in the internal projector temperature.
- Lamp indicator (P.80)
  Indicates a problem with the projection lamp or that the lamp needs to be replaced.
- Operation indicator (P.80)
  Flashes or lights to indicate the operating status of the projector.
- Control panel (P.9)
- Handle
  Hold this handle when lifting and transporting the projector.
- Foot adjust button (P.42)
  Press this button while lifting up the projector in order to make fine adjustments to the adjustable foot or to retract it.

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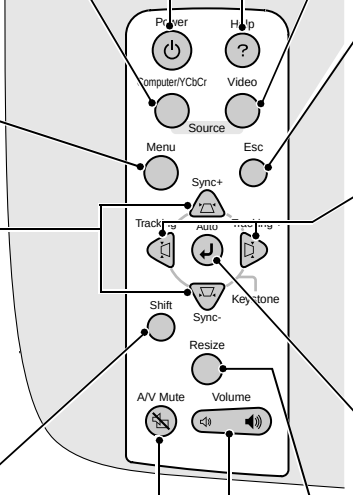
Control panel



● [Power] (P.37)
Turns the projector power on and off.

● [Help] (P.78)
Displays the online help menu to assist you if you have a problem.

● [Computer/YCbCr] (P.38)
Switches the input source between the Computer 1 port and the Computer 2/Component Video port each time the button is pressed.

● [Video] (P.38)
Switches the input source between the Video port and the S-Video port each time the button is pressed.

● [Esc] (P.75)
Stops the current function. Pressing [Esc] while viewing a menu or the online help displays the previous screen or menu.

● [Menu] (P.75)
Displays or hides the menus.

● [H-Keystone] (P.44)
Press this button if the projected image has horizontal keystone distortion.
If you press and hold the [Shift] button while pressing this button, you can adjust the tracking of computer images.

● [V-Keystone] (P.44)
Press this button if the projected image has vertical keystone distortion.
If you press and hold the [Shift] button while pressing this button, you can adjust the synchronization of computer images.

● [Auto] (P.46)
Automatically adjusts the computer image to the optimum image.
When a setting menu or help screen is displayed, this key functions as an ↵ button.
When a menu item is selected, press this button to proceed to the next screen.

● [Shift] (P.47)
This button does not function by itself. Press and hold this button while pressing either [Keystone] button to activate the function that is printed in orange on the control panel (Sync or Tracking).

● [Resize] (P.41, 55)
Changes the size of the projection area.

● [A/V Mute] (P.52)
Turns off the audio and video.

● [Volume] (P.49)
Adjusts the volume.

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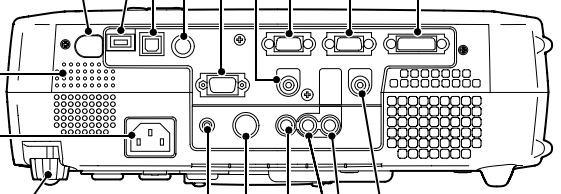
Rear



- **Audio Out port (P.34)**
  Outputs the audio signal being input to the projector.
  * If a stereo mini jack is connected here, the sound stops coming out from the projector's built-in speaker.
- **Control (RS-232C) port (P.104)**
  Connects the projector to a computer using an RS-232C cable.
- **Mouse port (P.25)**
  Connects the projector to a computer via the accessory PS/2 mouse cable when using the remote control as a wireless mouse.
- **USB port (P.24, 26, 104)**
  Connects the projector to a computer or USB equipment via the accessory USB cable.
- **Remote control receiver (P.14)**
  Receives signals from the remote control.
- **Speaker**
- **Power inlet (P.36)**
  Connects the power cord.
- **Rear adjustable foot (P.42)**
  Extend and retract to adjust the horizontal projection angle. At the time of purchase, there is packing attached to the rear adjustable foot. Remove this packing before using the projector.
- **Remote port (P.100)**
  Connects an optional remote control receiver to the projector.
- **S-Video port (P.30)**
  Inputs an S-Video signal to the projector from other video sources.
- **Monitor Out port (P.28)**
  Outputs the projected analog video signal from a computer to an external monitor. This is not available for digital video signals being input to the Computer 1 port or signals from other video sources.
- **Computer 2/Component Video port (P.20)**
  Inputs analog video signals from a computer and component video signals from other video sources.
- **Computer 1 port (P.21)**
  Inputs digital/analog RGB video signals from a computer.
- **Audio 1 port (P.24)**
  Inputs audio signals. Connects using a stereo mini jack.
- **Audio 2 port (P.24)**
  Inputs audio signals. Use the accessory A/V cable for this connection.
- **Video port (P.29)**
  Inputs composite video signals to the projector from other video sources. Use the accessory A/V cable for this connection.

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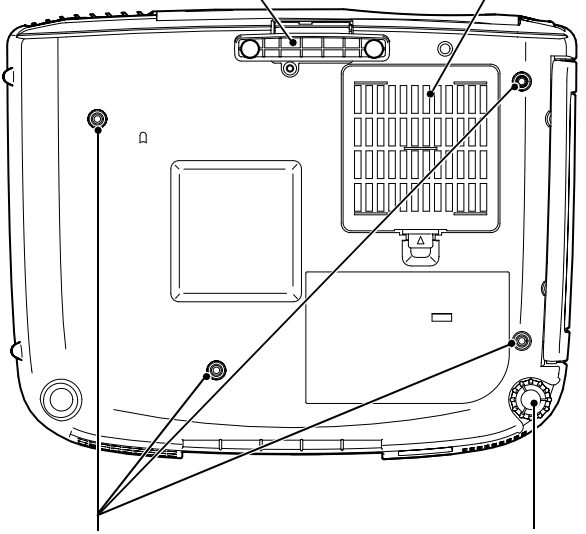
Base



- Front adjustable foot
- Air filter (air inlet) (P.92, 97)
  Prevents dust and other foreign particles from being drawn into the projector. When replacing the lamp, replace the air filter also.
- Suspension bracket fixing points (4 points) (P.16)
  Install the optional ceiling mount here when suspending the projector from the ceiling.
- Rear adjustable foot

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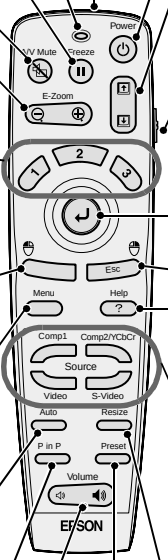
Remote control



● Remote control transmitter (P.14)
Outputs infrared remote control signals.

● Indicator
Lights when a remote control signal is being output.

● [Freeze] (P.54)
Keeps the current computer or video image on the screen.

● [A/V Mute] (P.52)
Turns off the audio and video.

● [E-Zoom] (P.56)
Enlarges or reduces the size of the image without changing the size of the projection area.

● Effect buttons (P.58)
Special effects functions are assigned to these buttons as follows.
[1]: Pointer/stamp
[2]: Spotlight
[3]: Bar

● [Left] (P.27)
Acts as a mouse left-click when using the remote control as a wireless mouse.

● [Menu] (P.75)
Displays or hides the menus.

● [Auto] (P.46)
Automatically adjusts the computer image to the optimum image.

● [P in P] (P.60)
Activates the Picture in Picture (P in P) function.

● [Volume] (P.49)
Adjusts the volume.

● [Preset] (P.63)
Selects one of the computer image resolutions that have been preset.

● [Power] (P.37)
Turns the projector power on and off.

● [↑]/[↓] (P.26)
When the projector is connected to a computer using the accessory USB cable, these keys function in the same way as the [↑]/[↓] keys on the USB keyboard.

● R/C switch (P.14)
Turns the remote control power on and off.

● ↵ (P.27, 75)
Press the edge of the ↵ button to move the mouse pointer in the direction of the edge pressed. When a menu is displayed, the ↵ button accepts the menu selection and displays the next screen or menu.

● [Right]/[Esc] (P.27, 76)
Stops the current function. Displays the previous screen or menu while viewing a menu or the online help. Acts as a mouse right-click when using the remote control as a wireless mouse.

● [Help] (P.78)
Displays the online help menu.

● [Source] (P.38)
[Comp1]: Switches to the images input from the Computer 1 port.
[Comp2/YCbCr]: Switches to the images input from the Computer 2/Component Video port.
[S-Video]: Switches to the images input from the S-Video port.
[Video]: Switches to the images input from the Video port.

● [Resize] (P.41, 55)
Changes the size of the projection area.

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Before Using the Remote Control

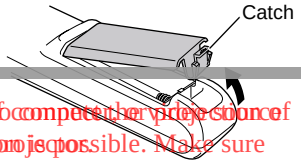
Inserting the Batteries

The batteries are not inserted into the remote control at the time of purchase, and so you need to insert them before the remote control can be used.

Procedure

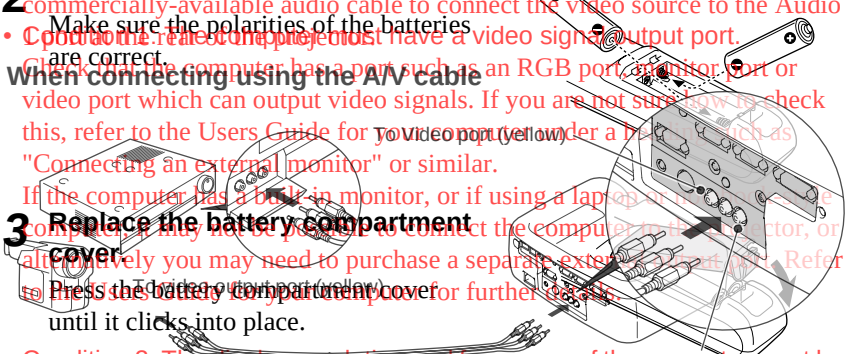
1 Remove the battery compartment cover.

While pushing the catch of the battery compartment cover, lift the cover up to remove it.



2 Insert the batteries.

Make sure the polarities of the batteries are correct.



3 Replace the battery compartment cover.

Press the battery compartment cover until it clicks into place.

Battery Replacement Period and Cautions

If the remote control becomes slow in responding or if it stops working, the batteries may be spent. If this happens, replace the batteries.

Guide to battery replacement period: After about 6 months if the remote control is used for 30 minutes each day

* The replacement period given above may vary depending on the amount of usage and the ambient conditions.

Use the following type of batteries as replacements.

2 AA manganese batteries

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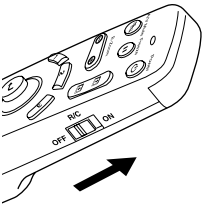
Using the Remote Control and Remote Operating Range

Using the Remote Control

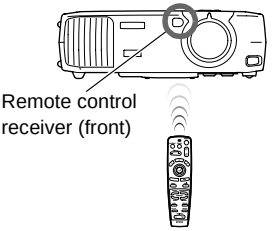
The remote control is used in the following way.

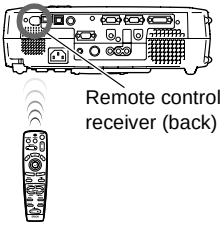
Procedure

1 **Set the R/C switch on the remote control to the ON position.**



2 **Point the remote control transmitter toward one of the remote control receivers on the projector and operate the remote control buttons.**





Tip :

- *Do not allow sunlight or light from fluorescent lamps to shine directly onto the projector's remote control receivers, otherwise it may interfere with the reception of signals from the remote control.*
- *Set the R/C switch on the remote control to the OFF position when not using the remote control. Leaving the R/C switch on will consume battery power.*

Remote Operating Range

Use the remote control within the ranges indicated below. If the distance or angle between the remote control and the remote control receiver is outside the normal operating range, the remote control may not work.

Operating distance	Operating angle
Approx. 32.81 feet (10 m)	Approx. ±30° horizontally Approx. ±15° vertically

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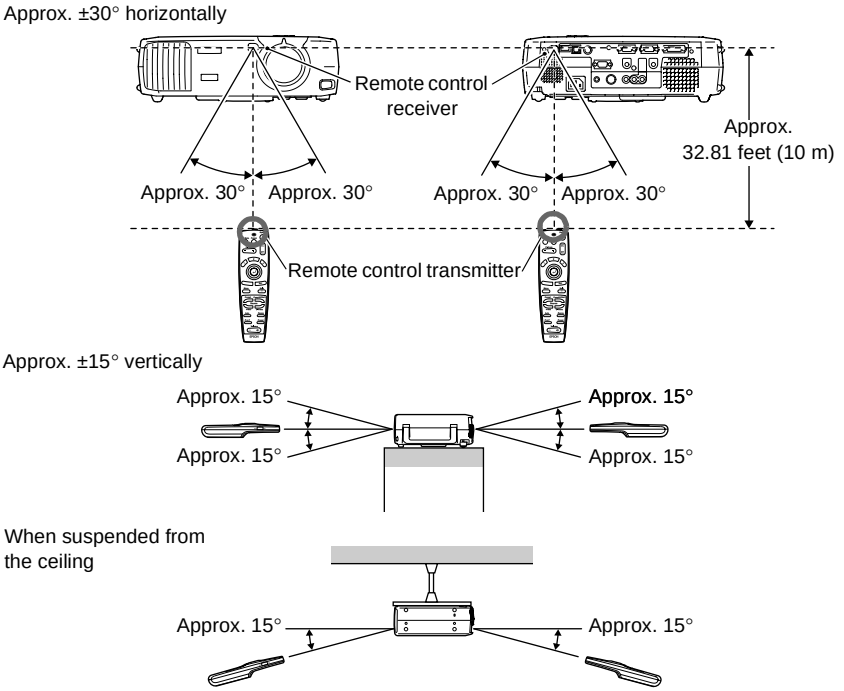

Tip :

If you would like to use the remote control from a distance outside the normal operating range, use the optional remote control receiver.

See "Appendix: Optional Accessories" (P.100)

Notes on Handling the Remote Control

Make sure that you observe the following at all times to avoid malfunctions or damage to the remote control.

- Do not drop the remote control or subject it to strong shocks.
- Do not allow the remote control to become wet. If it does become wet, wipe it immediately with a dry cloth.
- Remove the batteries if you will not be using the remote control for a long period of time. The batteries may leak if they are left inside the remote control.
- Some functions can only be carried out using the remote control. Keep the remote control near the projector at all times so that you do not lose the remote control.

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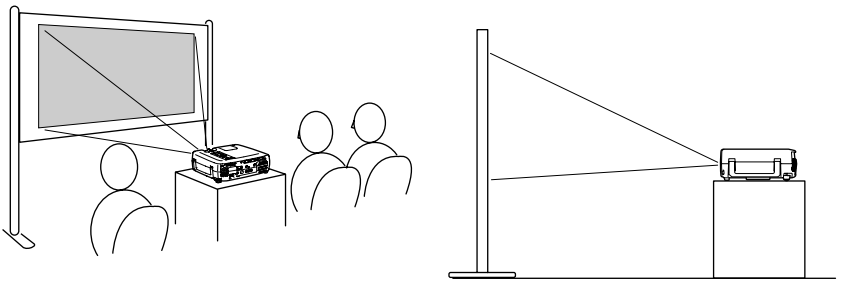
Installation

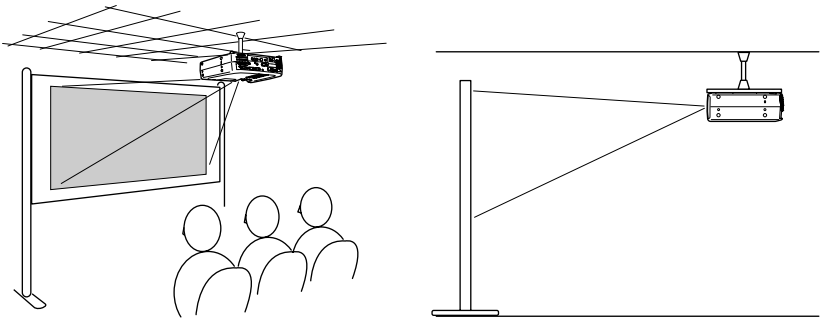
Setting Up the Projector

The projector supports the following four different projection methods, allowing you to choose the best method for displaying your images.
When setting up the projector, be sure to first read the Safety Instructions/ World-Wide Warranty Terms for information on the safety precautions that must be observed at this time.

- Front projection



- Front/ceiling projection



* A special method of installation is required in order to suspend the projector from the ceiling. Please contact the place of purchase if you would like to use this installation method.

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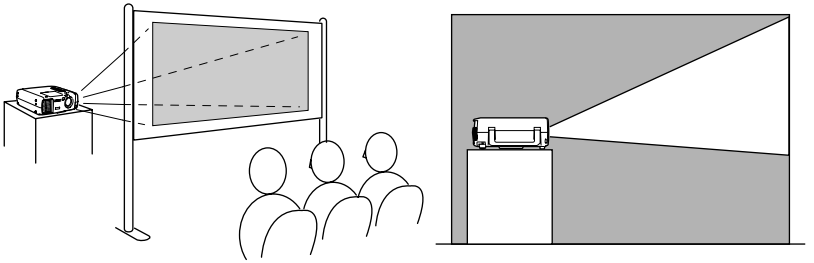
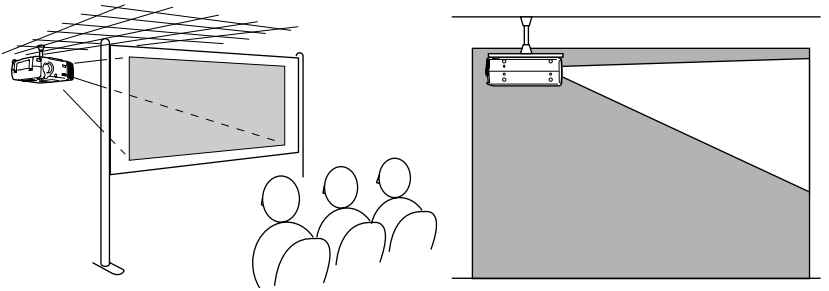
• Rear projection using a translucent screen



• Rear/ceiling projection using a translucent screen



* A special method of installation is required in order to suspend the projector from the ceiling. Please contact the place of purchase if you would like to use this installation method.

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Screen Size and Projection Distance

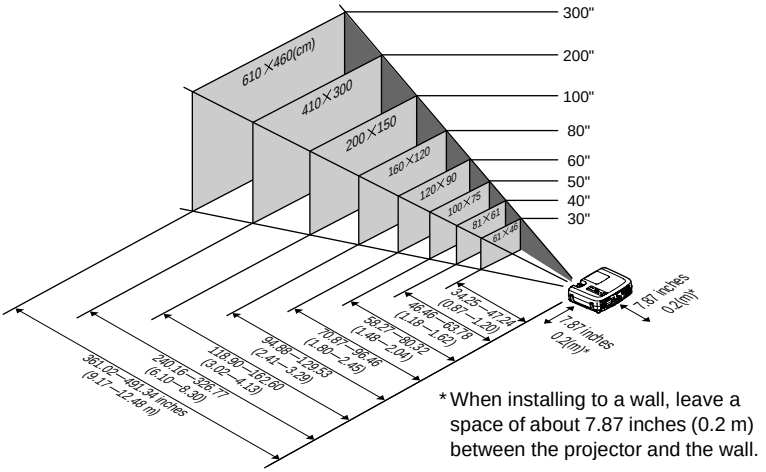
The distance between the projector and the screen determines the actual image size.

Recommended distance	34.25 – 491.34 inches (0.87m – 12.48m)

While referring to the table below, position the projector so that the image size is smaller than the screen size.

Screen size (inches (cm))	Approximate projection distance* (inches (m))
30” (24.02×18.11 (61×46))	34.25 – 47.24 (0.87 – 1.20)
40” (31.89×24.02 (81×61))	46.46 – 63.78 (1.18 – 1.62)
50” (39.37×29.53 (100×75))	58.27 – 80.32 (1.48–2.04)
60” (47.24×35.43 (120×90))	70.87 – 96.46 (1.80 – 2.45)
80” (62.99×47.24 (160×120))	94.88 – 129.53 (2.41 – 3.29)
100” (78.74×59.06 (200×150))	118.90 – 162.60 (3.02 – 4.13)
200” (161.42×118.11 (410×300))	240.16 – 326.77 (6.10 – 8.30)
300” (240.16×181.1 (610×460))	361.02 – 491.34 (9.17 – 12.48)

* The value for the projection distance should be used as a guide for setting up the projector. The actual distance will vary depending on projection conditions.



* When installing to a wall, leave a space of about 7.87 inches (0.2 m) between the projector and the wall.

Tip :

- *The projector’s lens allows a zoom ratio of up to about 1.35. The image size at the maximum zoom setting is about 1.35 times bigger than the image size at the minimum zoom setting.*
- *The image size will be reduced when keystone correction is carried out.*

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Before Using the Remote Control

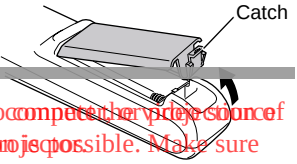
Inserting the Batteries

The batteries are not inserted into the remote control at the time of purchase, and so you need to insert them before the remote control can be used.

Procedure

1 Remove the battery compartment cover.

While pushing the catch of the battery compartment cover, lift the cover up to remove it.



2 Insert the batteries.

Make sure the polarities of the batteries are correct.

3 Replace the battery compartment cover.

Press the battery compartment cover until it clicks into place.

Battery Replacement Period and Cautions

If the remote control becomes slow in responding or if it stops working, the batteries may be spent. If this happens, replace the batteries with new ones.

Guide to battery replacement period: After about 6 months if the remote control is used for 30 minutes each day

* The replacement period given above may vary depending on the amount of usage and the ambient conditions.

Use the following type of batteries as replacements.

2 AA manganese batteries

Tip :

After making the connections, change the Audio Input *setting in the* Audio *menu to either* Audio1, Audio2 *or* USB, *depending on which input port you are using. The default setting is* Audio2.

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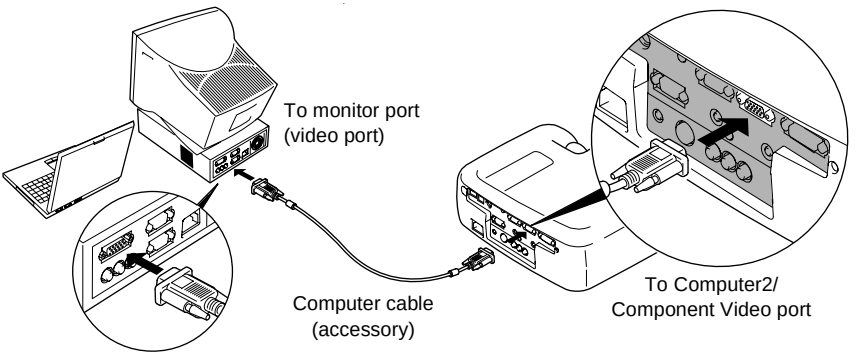
Projecting Images from the Computer

The shape and specifications of the computer's monitor port will determine which projector port and what type of cable should be used. Check the following to see which type of port your computer has.

If the monitor port is a mini D-Sub 15-pin port

Use the accessory computer cable to connect the Computer 2/Component Video port at the rear of the projector to the monitor port of the computer.
If you are connecting two computers with analog RGB output to the projector, use the optional DVI analog cable to connect the monitors of the two computers to the Computer 1 port at the rear of the projector.
See "Appendix: Optional Accessories" (P.100)

When connecting to the Computer 2/Component Video port



Tip :

- *If more than one external component is connected to the projector, change the **Comp2/ YCbCr Input** or **Comp1 Input** setting in the **Setting** menu to **Analog-RGB** after making the connections. (P.69)*
- *Do not bind the power cord and the computer cable together, otherwise image interference or errors in operation may result.*
- *You may need to purchase a separate adapter to connect the computer to the projector, depending on the shape of the computer's monitor port. Refer to the Users Guide for the computer for details.*
- *The optional Mac Adapter Set is required in order to connect the projector to a Macintosh computer. See "Appendix: Optional Accessories" (P.100)*
- *If the computer and projector are too far away from each other for the accessory cable to reach, or If you would like to project computer images at UXGA resolution, use the optional computer cable. See "Appendix: Optional Accessories" (P.100)*

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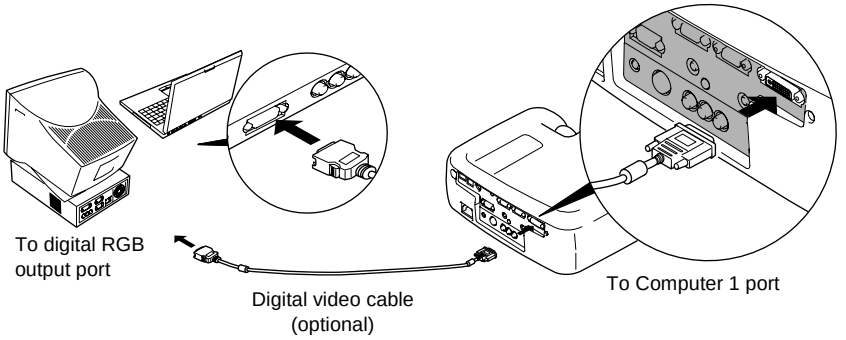
If the monitor port is a digital RGB connector

If the computer has a standard DVI or DFP-compliant digital video card or video output port, use an optional digital video cable to connect the monitor port of the computer to the Computer 1 port at the rear of the projector. The type of connection cable used will vary depending on the specifications for the computer's monitor port.

See “Appendix: Optional Accessories” (P.100)



Tip :

- *You may need to change the computer settings when switching the computer output to digital RGB. Refer to the Users Guide for the computer for details.*
- *If you are connecting a computer with a mini D-Sub 15-pin output port to the projector at the same time, connect the computer with the mini D-Sub 15-pin output port to the Computer 2/Component Video port of the projector.*
- *If more than one external component is connected to the projector, change the **Comp1 Input** setting in the **Setting** menu to **Digital-RGB** after making the connections. (P.69)*

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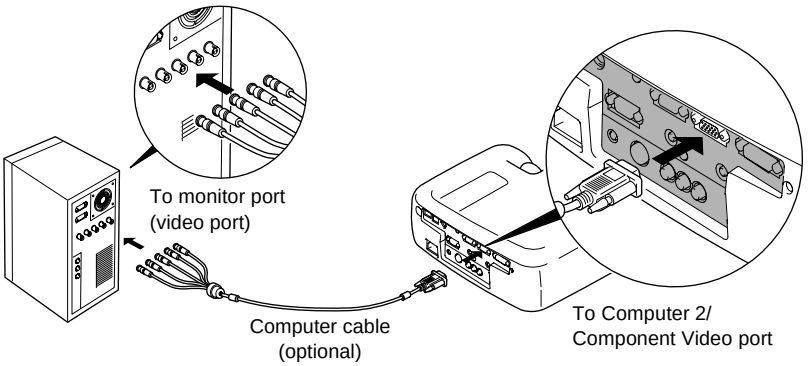
If the monitor port is a 5BNC port

Use the optional computer cable to connect the Computer 2/Component Video port at the rear of the projector to the monitor port of the computer.
See “Appendix: Optional Accessories” (P.100)



Tip :

- *If more than one external component is connected to the projector, change the **Comp2/YCbCr Input** setting in the **Setting** menu to **Analog-RGB** after making the connections. (P.69)*
- *Do not bind the power cord and the computer cable together, otherwise image interference or errors in operation may result.*

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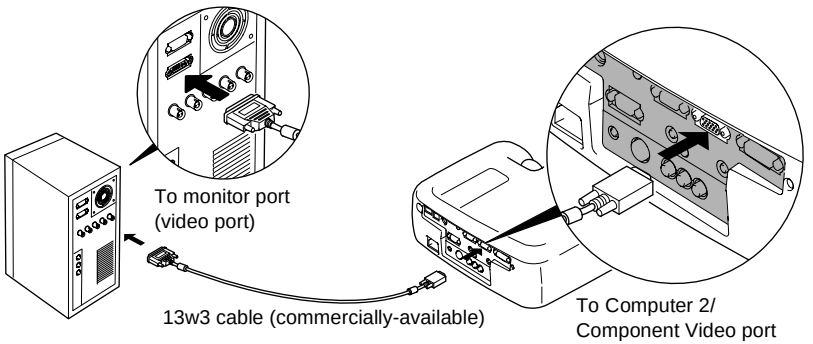
If the monitor port is a 13w3 port

Some workstation-type computers have a 13w3 monitor port.
Use a commercially-available 13w3 ⇔ D-Sub 15-pin adapter cable to connect the Computer 2/Component Video port at the rear of the projector to the monitor port of the computer.



Tip :

- *If more than one external component is connected to the projector, change the **Comp2/YCbCr Input** setting in the **Setting** menu to **Analog-RGB** after making the connections. (P.69)*
- *Do not bind the power cord and the computer cable together, otherwise image interference or errors in operation may result.*
- *Some workstations may require a special cable. Consult the workstation manufacturer for further details.*

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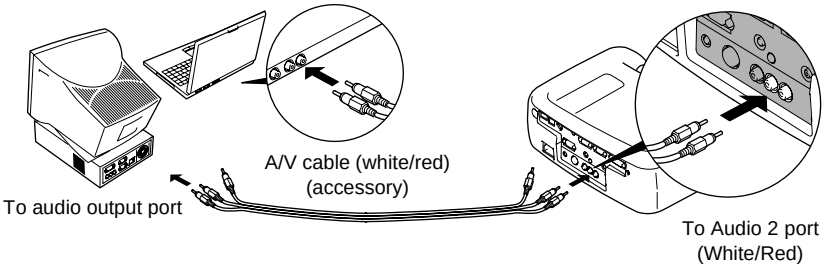
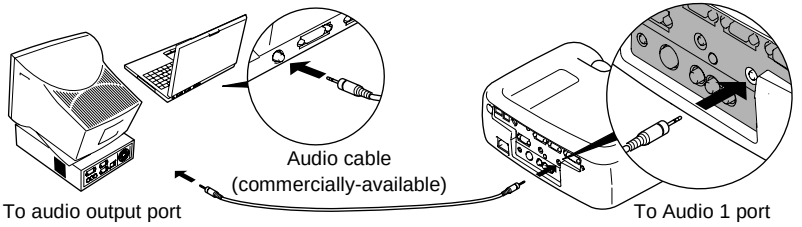
Playing Sound from the Computer

The projector has a single built-in speaker with a maximum output of 5W. You can use this built-in speaker to output the audio signals from a computer by using any one of the following three connection methods, depending on the shape of the computer's audio output port and the type of cable you have.

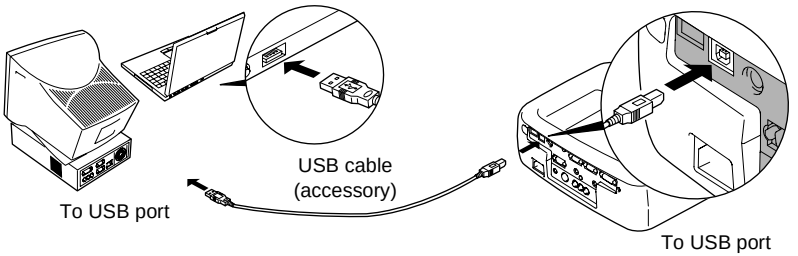
- By using the accessory A/V cable (white/red) to connect the computer's audio output ports to the Audio 2 port (RCA jack) at the rear of the projector



- By using a commercially-available audio cable to connect the computer's audio output ports to the Audio 1 port (stereo mini jack) at the rear of the projector. It is recommended that you use an audio cable with a 3.5 mm diameter stereo mini jack.



- For a computer which is capable of USB audio output, by using the accessory USB cable to connect the computer's USB port to the USB port at the rear of the projector.



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Tip :

- *After making the connections, change the **Audio Input** setting in the **Audio** menu to either **Audio1**, **Audio2** or **USB**, depending on which input port you are using. (P.67)*
- *You can also connect external speakers to the projector in order to reproduce the audio signals. (P.34)*
- *The USB cable can only be connected to computers with a standard USB interface. If using a computer which is running Windows, the computer must have had a full version of Windows 98/2000/Me installed. If the computer is running a version of Windows 98/2000/Me that has been upgraded from an earlier version of Windows, correct operation cannot be guaranteed. If using a Macintosh computer, the computer must be running OS9.0 – 9.1. It may not be possible to use the USB audio function under some versions of both the Windows and Macintosh operating systems.*
- *If using a USB cable to output sound from the computer, you may need to change the computer settings. For details, refer to the section of the documentation provided with your computer.*

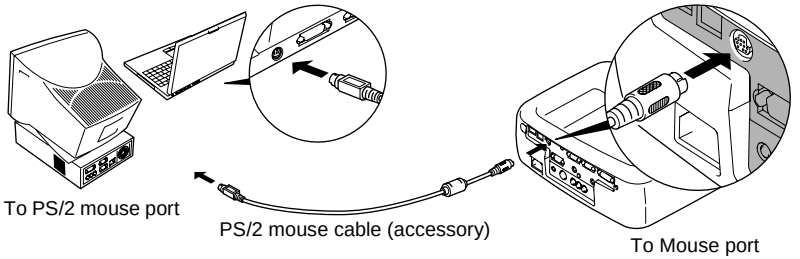
Using the Remote Control to Operate the Mouse Pointer

You can use the remote control as a wireless mouse to control the mouse pointer on the computer screen. To do this, you must use a mouse cable to connect the mouse port of the computer to the mouse port or the USB⏩ port at the rear of the projector.

Computer	Mouse used	Applicable cable
Windows	PS/2 mouse	PS/2 mouse cable (supplied)
	USB mouse	USB cable (supplied)
Macintosh (OS8.6 – 9.1)	USB mouse	USB cable (supplied)

Example of PS/2 mouse connection

Turn off the power for both the projector and the computer before connecting them. If the power for either device is on at the time of connection, errors in operation or damage may result.



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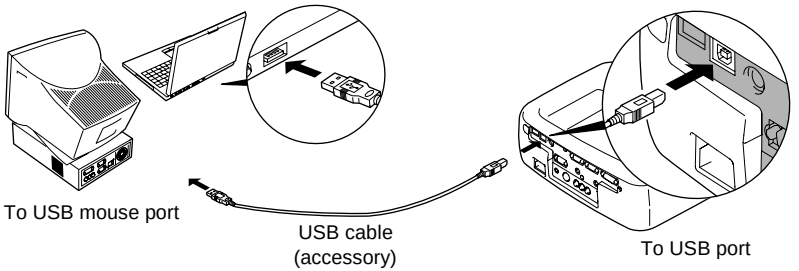
Example of USB mouse connection



* If you make a USB connection, you can use the [↑] and [↓] buttons on the remote control. These buttons can be used to scroll back and forth through pages when projecting a PowerPoint presentation.

Tip :

- *The USB cable can only be connected to computers with a standard USB interface. If using a computer which is running Windows, the computer must have had a full version of Windows 98/2000/Me installed. If the computer is running a version of Windows 98/2000/Me that has been upgraded from an earlier version of Windows, correct operation cannot be guaranteed.*
  If using a Macintosh computer, the computer must be running OS8.6 – 9.1.
  It may not be possible to use the mouse function under some versions of both the Windows and Macintosh operating systems.
- *Some computer settings may have to be changed in order for the mouse function to be used. Consult the Users Guide for the computer for further details.*
- *A PS/2 mouse and a USB mouse cannot be used simultaneously.*

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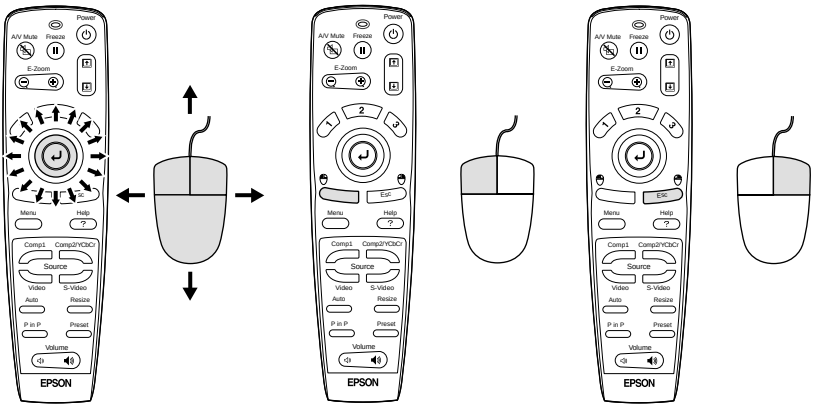
Once the connection has been made, the mouse pointer can be operated as follows.

Moving the mouse pointer	Left click	Right click
Press the edge of the ⏎ button to move the mouse pointer in the direction of the edge pressed. The ⏎ button can be tilted in any one of 16 directions.	Press the [Left] button.	Press the [Right/Esc] button.



Tip :

- *If the mouse button settings have been reversed at the computer, the operation of the remote control buttons will also be reversed.*
- *The wireless mouse function cannot be used when any of the following functions are being used.*
  •During menu display •Effect •Before setting a Picture in Picture sub-screen
  •E-zoom •When image size is set to normal display (resizing off) (for resolutions of SXGA and above)

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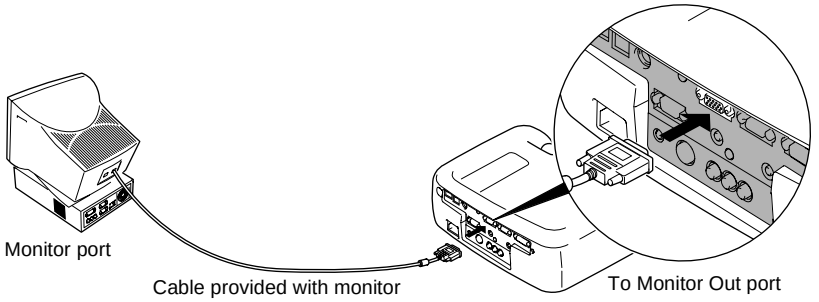
Connecting to an External Monitor

Images can be viewed on an external computer monitor at the same time they are being projected by the projector. Use the cable provided with the computer monitor to connect the monitor to the Monitor Out port at the rear of the projector.



Tip :

- *The optional Mac Adapter Set may be required in order to connect the projector to a Macintosh computer.*
  See "Appendix: Optional Accessories" (P.100)
- *Digital RGB signals that are being input to the Computer 1 port cannot be output to an external monitor.*
- *Video images cannot be output to an external monitor.*

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Before Using the Remote Control

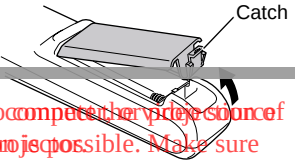
Inserting the Batteries

The batteries are not inserted into the remote control at the time of purchase, and so you need to insert them before the remote control can be used.

Procedure

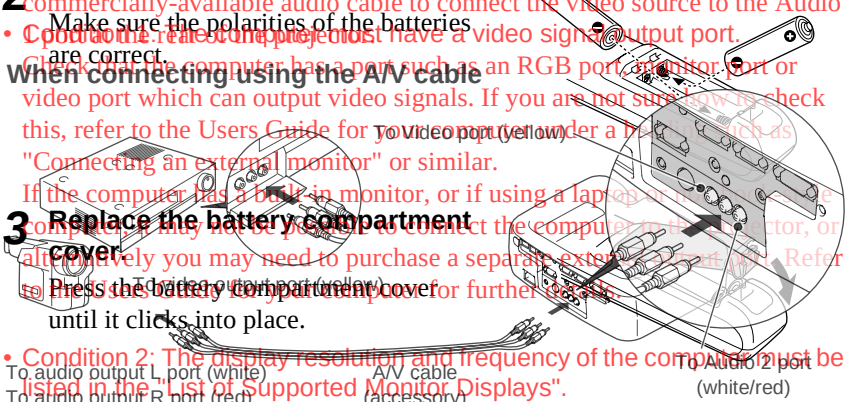
1 **Remove the battery compartment cover.**

While pushing the catch of the battery compartment cover, lift the cover up to remove it.



2 **Insert the batteries.**

Make sure the polarities of the batteries are correct.



3 **Replace the battery compartment cover.**

Press the battery compartment cover until it clicks into place.

Battery Replacement Period and Cautions

If the remote control becomes slow in responding or if it stops working, the batteries may be spent. If this happens, replace the batteries.

Guide to battery replacement period: After about 6 months if the remote control is used for 30 minutes each day*

* The replacement period given above may vary depending on the amount of usage and the ambient conditions.

Use the following type of batteries as replacements.

2 AA manganese batteries

Tip :

*After making the connections, change the **Audio Input** setting in the **Audio** menu to either **Audio1**, **Audio2** or **USB**, depending on which input port you are using. The default setting is **Audio2**.*

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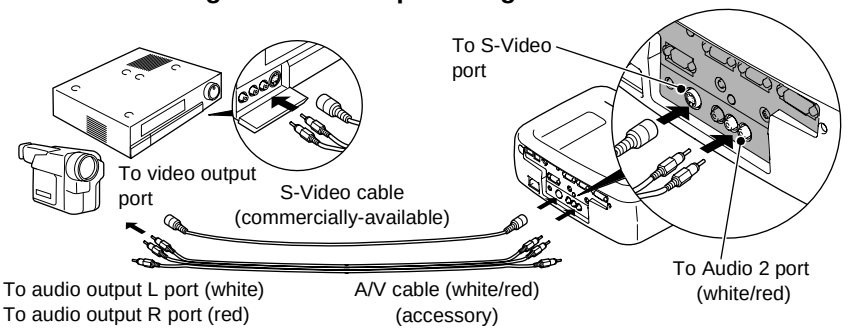
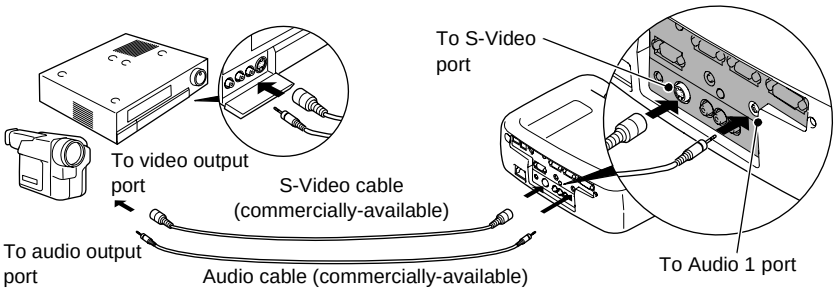
Projecting S-Video Images

- Use a commercially-available S-Video cable to connect the video source to the S-Video port at the rear of the projector.
- If you would like the sound to come out of the projector's built-in speaker, use the accessory A/V cable (red/white) to connect the video source to the Audio 2 port at the rear of the projector. Alternatively, use a commercially-available audio cable to connect the video source to the Audio 1 port at the rear of the projector. Use either method depending on the shape of the video source's audio output port and on the type of cable you have.

When connecting the audio output using an A/V cable


To S-Video port
To video output port
S-Video cable (commercially-available)
To audio output L port (white)
To audio output R port (red)
A/V cable (white/red) (accessory)
To Audio 2 port (white/red)

When the video equipment's audio output port is a stereo mini jack



Tip :

*After making the connections, change the **Audio Input** setting in the **Audio** menu to either **Audio1**, **Audio2** or **USB**, depending on which input port you are using. The default setting is **Audio2**.*

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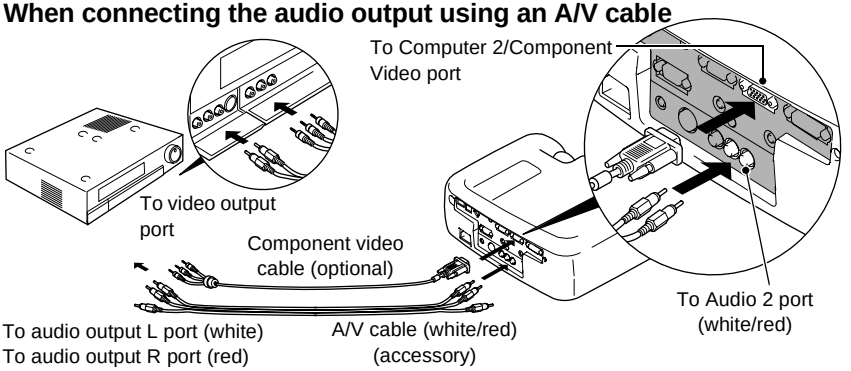
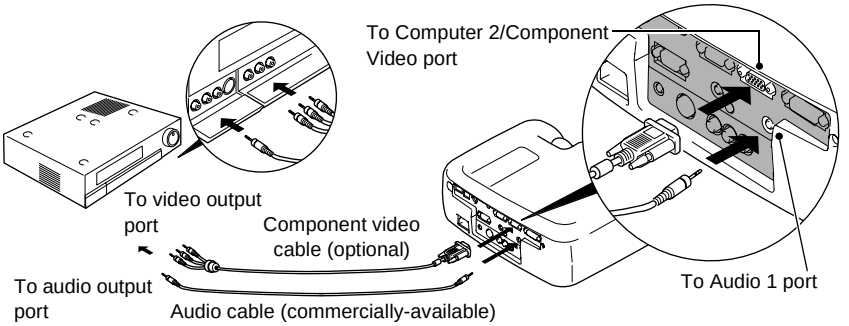
Projecting Component Video Images

- Use the optional component video cable to connect the video source to the Computer 2/Component Video port at the rear of the projector.
  See “Appendix: Optional Accessories” (P.100)
- If you would like the sound to come out of the projector's built-in speaker, use the accessory A/V cable (red/white) to connect the video source to the Audio 2 port at the rear of the projector. Alternatively, use a commercially-available audio cable to connect the video source to the Audio 1 port at the rear of the projector. Use either method depending on the shape of the video source’s audio output port and on the type of cable you have.

When connecting the audio output using an A/V cable


To Computer 2/Component Video port
To video output port
Component video cable (optional)
To Audio 2 port (white/red)
To audio output L port (white)
To audio output R port (red)
A/V cable (white/red) (accessory)

When the video equipment's audio output port is a stereo mini jack


To Computer 2/Component Video port
To video output port
Component video cable (optional)
To Audio 1 port
To audio output port
Audio cable (commercially-available)

Tip :

- *If more than one external component is connected to the projector, change the **Comp2/ YCbCr Input** setting in the **Setting** menu to "YCbCr" or "YPbPr", depending on the type of signal being input. (P.69)*
  For HDTV (750P or 1125i), "YPbPr" will be selected regardless of the above setting.
- *After making the connections, change the **Audio Input** setting in the **Audio** menu to either **Audio1**, **Audio2** or **USB**, depending on which input port you are using.*

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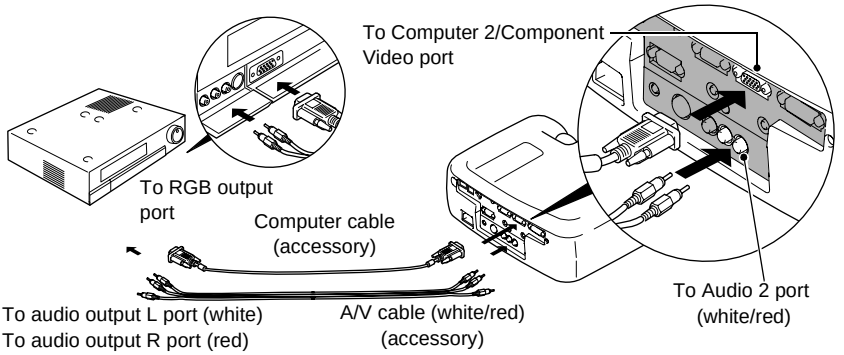
Projecting RGB Video Images

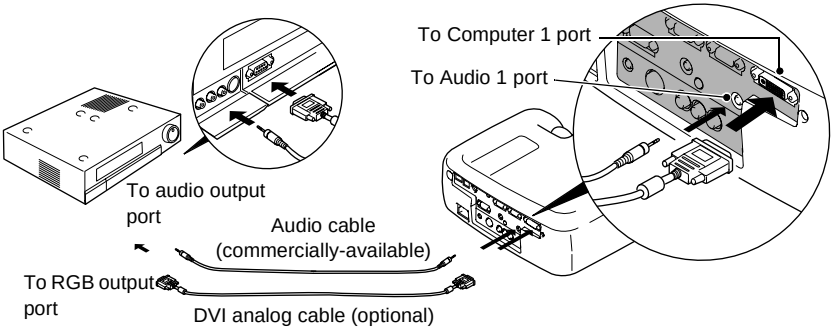
RGB video is used when RGB signals that have copy protection added are input and projected.

- Use the accessory computer cable to connect the video source to the Computer 2/Component Video port at the rear of the projector. Alternatively, use the optional DVI analog cable to connect the video source to the Computer 1 port at the rear of the projector.
  See “ Appendix: Optional Accessories” (P.100)
- If you would like the sound to come out of the projector's built-in speaker, use the accessory A/V cable (red/white) to connect the video source to the Audio 2 port at the rear of the projector. Alternatively, use a commercially-available audio cable to connect the video source to the Audio 1 port at the rear of the projector. Use either method depending on the shape of the video source’s audio output port and on the type of cable you have.

When the video equipment's audio output port is an RCA pin jack
When the video equipment's video output port is a mini D-Sub 15-pin port


To Computer 2/Component Video port
To RGB output port
Computer cable (accessory)
To audio output L port (white)
To audio output R port (red)
A/V cable (white/red) (accessory)
To Audio 2 port (white/red)

When the video equipment's audio output port is a stereo mini jack
When the video equipment's video output port is a DVI-I port



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Tip :

- *RGB video is only compatible with sync-in-green signals. This can be checked by looking at **SYNC Mode** in the **About** menu.*
- *After making the connections, change the **Comp1 Input** or **Comp2 /YCbCr Input** setting in the **Setting** menu to **RGB Video**.*
  *For separate sync (separate H-SYNC and V-SYNC) signals, set to **Analog-RGB**. (P.69) This can be checked by looking at **SYNC Mode** in the **About** menu.*
- *After making the connections, change the **Audio Input** setting in the **Audio** menu to either **Audio1**, **Audio2** or **USB**, depending on which input port you are using. The default setting is **Audio2**.*

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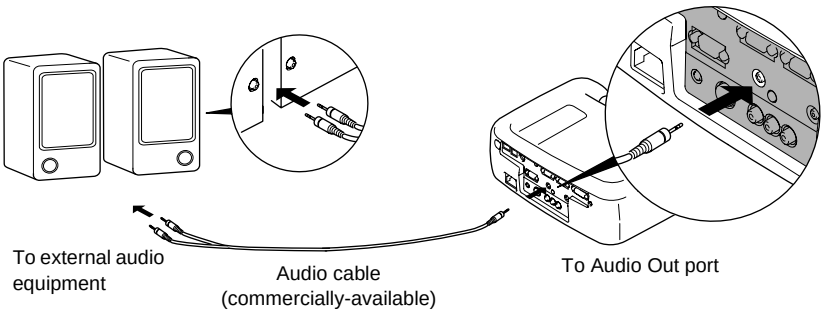
Connecting to an External Speaker

You can connect the projector's Audio Out port to speakers with a built-in amplifier in order to enjoy even fuller sound.
Use a commercially-available audio cable with pin jack ⇔ stereo mini jack 0.14 inches (3.5 mm) plugs or similar.
Use an audio cable with a connector that matches the port for the audio equipment.



Tip :

If a stereo mini jack is connected to the Audio Out port, the sound will be externally output, and will stop coming out from the projector's built-in speaker.

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Basic Operations

This chapter describes basic operations such as turning projection on and off and adjusting the projected images.

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- **Turning On the Power and Projecting Images 37**

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- **Adjusting the Image Angle 42**
- **Correcting Keystone Distortion 44**

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- **Focusing the Screen Image 46**
- **Adjusting Computer Images 46**
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  - Adjusting the tracking 47
  - Adjusting the synchronization 48

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Turning On the Projector

Turn on the power to start projecting images.
Be sure to read the separate Safety Instructions/World-Wide Warranty Terms and check the points that must be noted before using the projector to project images.

Connecting the Power Cord

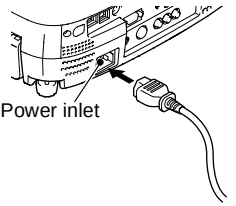
Procedure

1 **Check that the power is turned off for the projector and all components connected to the projector.**

2 **Connect the computer or other video source to the projector. (P.19, 29)**

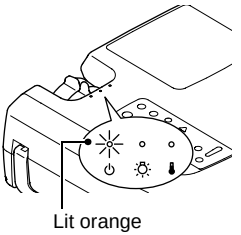
3 **Remove the lens cover.**
Place your finger under the top of the lens cover and pull to remove the cover.

4 **Connect the accessory power cord to the projector.**
Check that the power cord connector is facing the same way as the power inlet on the projector, and then insert the power cord connector securely into the projector.



5 **Connect the other end of the power cord to a grounded electrical outlet.**
The operation indicator lights orange.

Tip :
The projector buttons cannot be operated while the operation indicator is flashing orange. Wait until it lights steadily.



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Turning On the Power and Projecting Images

Procedure

1 Turn on the power for all equipment connected to the projector.

For a video source, press the [Play] button at the video source to start playback if necessary.

2 Check that the operation indicator has stopped flashing and lights orange.

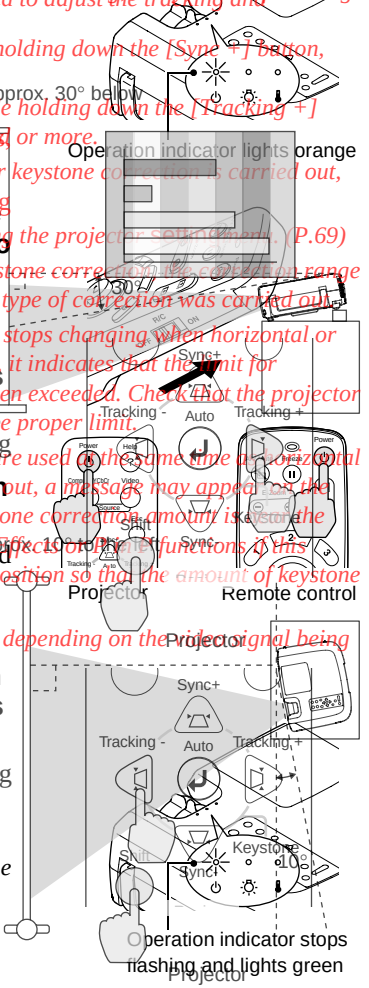
3 If using the remote control, set the R/C switch on the remote control to the ON position.

4 Press the [Power] button on either the remote control or the projector's control panel to turn on the power for the projector.

The operation indicator flashes green, and after a short period projection starts.

Depending on the settings, the message "No-Signal." may appear. (P.70)

5 Check that the operation indicator has stopped flashing and lights green.



Adjusting the tracking

If vertical stripes appear in the projected images, or if the images become unevenly spaced, adjustment of the tracking may improve the image. Tracking adjustment cannot be carried out when a computer signal is being input.

Procedure

While holding down the [Shift] button on the projector's control panel, press the [Tracking +] button.

The tracking value will increase by one setting each time the [Tracking +] button is pressed.

[While holding down the [Shift] button on the projector's control panel, press the [Tracking -] button.

The tracking value will decrease by one setting each time the [Tracking –] button is pressed.

Tip :

The projector buttons cannot be operated while the operation indicator is flashing green. Wait until it lights steadily.

Tip :

The image will flash when continuous tracking adjustment is carried out, but this is normal.

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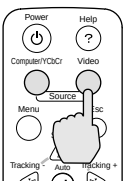
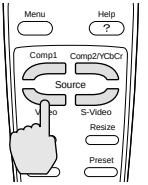
6 **If more than one signal source has been connected, use the remote control or control panel buttons to select the port which the signal source that you would like to use is connected to, while referring to the following table.**



Projector



Remote control

Port	Button to press		Display at bottom-left of screen
	Control panel	Remote control	
Computer1	[Computer/YCbCr]	[Comp1]	Computer1(Digital-RGB) Computer1(Analog-RGB) Computer1(RGB-Video)
Computer2/ Component Video		[Comp2/YCbCr]	Computer2(Analog-RGB) Computer2(RGB-Video) Computer2(YCbCr) Computer2(YPbPr)
S-Video	[Video]	[S-Video]	S-Video
Video		[Video]	Video

Tip :

- *If only one signal source has been connected, the signals from that source will be projected without needing to press one of the above buttons.*
- *If the "No-Signal." message does not disappear, check the connections again.*
- *If a laptop computer or a computer with a LCD screen has been connected to the projector, the images may not be projected straight away. After making the connections, check that the computer has been set up to output signals.*
  The following table shows examples of how to toggle output settings. For details, refer to the section of the documentation provided with your computer under a heading such as "External output", "Connecting an external monitor" or similar.

NEC	Panasonic	Toshiba	IBM	Sony	Fujitsu	Macintosh
[Fn]+[F3]	[Fn]+[F3]	[Fn]+[F5]	[Fn]+[F7]	[Fn]+[F7]	[Fn]+[F10]	After startup, change the Control Panel adjustments so that Mirroring is active.

- *If the same still picture is projected for a long period of time, the projected image may become "burned in" on the computer screen. You should avoid leaving the same image displayed for long periods.*

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Turning Off the Projector

Follow the procedure below to turn off the power of the projector.

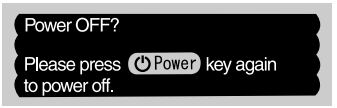
Procedure

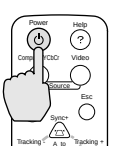
1 Turn off the power for the signal sources that are connected to the projector.

Check that the power for all connected components has been tuned off.

2 Press the [Power] button on either the remote control or the projector's control panel.

The following confirmation message will appear.





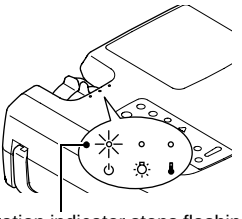
Projector

Remote control

If you do not want to turn off the power, press any button except the [Power] button.
If you do not press any button, the message will disappear automatically after seven seconds. (The power will not turn off at this time.)

3 Press the [Power] button once more.

The lamp unit will turn off and the operation indicator will flash orange as the cool-down period starts.


Operation indicator stops flashing and lights orange

4 Check that the cool-down is complete.

When cool-down is complete, the operation indicator lights orange.
The cool-down period lasts for approximately 2 minutes. (This varies depending on factors such as the ambient air temperature.)

Tip :

The projector buttons cannot be operated while the operation indicator is flashing orange. Wait until it lights steadily.

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5 Unplug the power cord from the electrical outlet.

Caution :

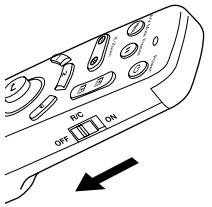
Do not disconnect the power cord from the outlet while the operation indicator is still flashing orange. If you disconnect the power cord while the indicator is still flashing, it may result in errors in projector operation and reduce the lamp unit operating life.

6 Set the R/C switch on the remote control to the OFF position.

Tip :

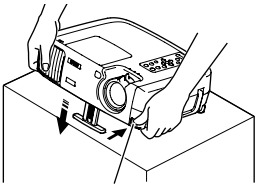
If you leave the R/C switch at the ON position, the remote control will continue to consume battery power.

Move the R/C switch to the OFF position when not using the remote control.



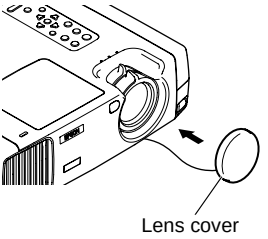
7 Retract the front adjustable foot if it is extended.

Gently push down on the projector while pressing the foot adjust button.



8 Attach the lens cover.

Attach the lens cover to the lens when not using the projector, in order to stop the lens from getting dusty or dirty.



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Adjusting the Screen Image

You can adjust the screen image in order to obtain the best possible picture.

Adjusting the Image Size

The size of the projected image is basically determined by the distance from the projector to the screen. (P.18)
The following procedures explain how to adjust the screen image once the projector itself has been set up.

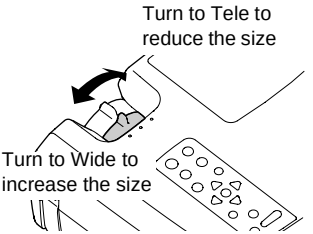
Tip :
The E-Zoom function lets you enlarge parts of the image. (P.56)

Procedure

Turn the zoom ring on the projector to adjust the image.

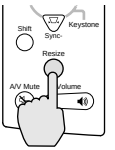
The image can be enlarged in this way to 1.35 times the normal size.

If you would like to enlarge the image further, move the projector further away from the screen. (P.18)

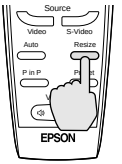


Tip :
For computer images, you can use the [Resize] button to switch between resized display and normal size display.

- *Resized display (default):*
  The images are processed so that they automatically fill the whole of the projection area, regardless of the resolution setting.
- *Normal sized display (window display):*
  The images are projected at the same resolution that they are input. The image size and the projection area may be different depending on the resolution.



Projector



Remote control

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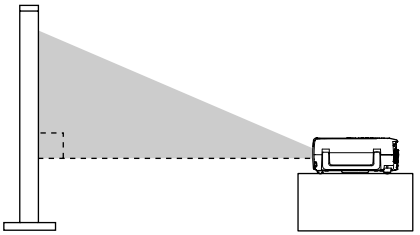
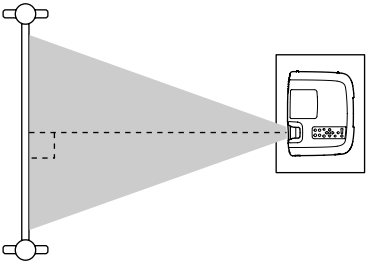
Adjusting the Image Angle

You can change the projection angle for the projector. The projector should be as perpendicular to the screen as possible.

Seen from the side



Seen from above

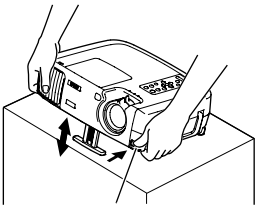


You can extend or retract the front adjustable foot to adjust the projection angle within a maximum range of 12°.

Procedure

While pressing the foot adjust button, lift up the front of the projector so that the front adjustable foot can extend.

Extend the front adjustable foot until the desired angle is obtained, and then release the foot adjust button.



Foot adjust button

Tip :

- *When the foot is adjusted, it may cause the size of the projected images to become distorted. Use the keystone correction function to adjust this distortion. (P.44)*
- *To retract the front adjustable foot, keep pressing the foot adjust button. The front adjustable foot will slowly retract inside the projector.*
- *If the projector is tilted horizontally, turn the rear adjustable foot to adjust the angle.*

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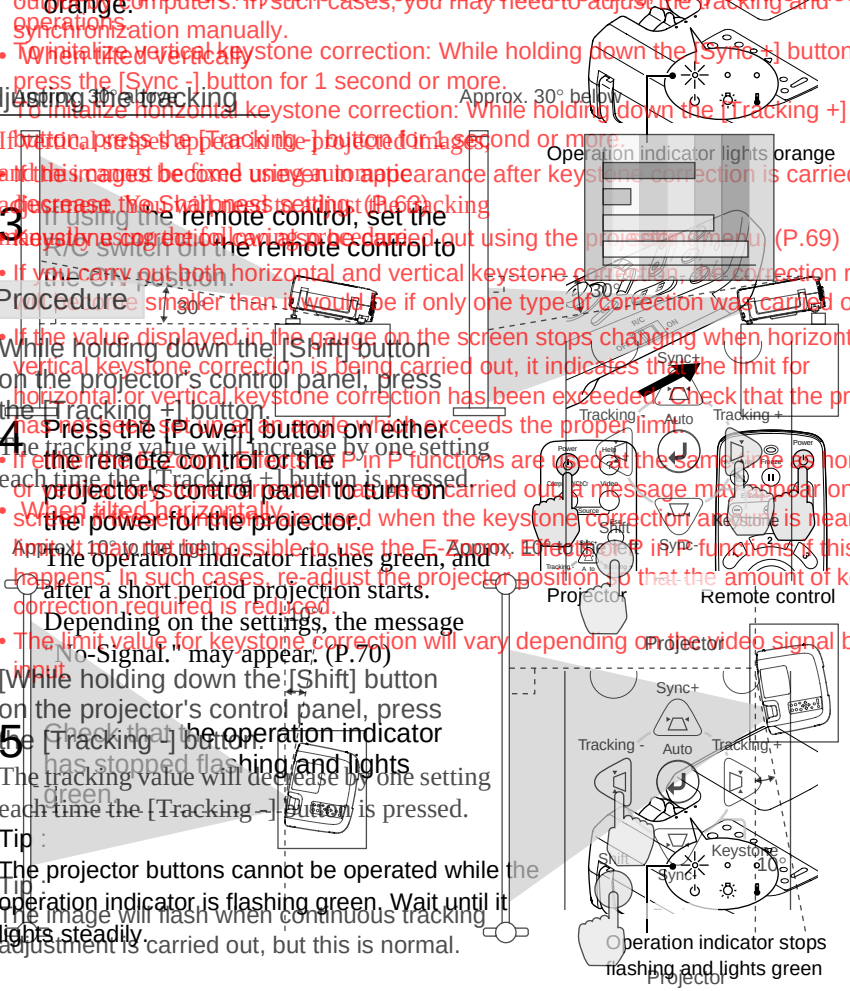
Turning On the Power and Projecting Images

Procedure

1. Turn on the power for all equipment connected to the projector.
   For a video source, press the [Play] button at the video source to start playback if necessary.
2. Check that the operation indicator has stopped flashing and lights orange.
3. Using the remote control, set the R/C switch on the remote control to ON position.
4. Press the [Power] button on either the remote control or the projector's control panel to turn on the power for the projector.
   The operation indicator flashes green, and after a short period projection starts.
   Depending on the settings, the message "No-Signal." may appear. (P.70)
5. Check that the operation indicator has stopped flashing and lights green.

Tip :

The projector buttons cannot be operated while the operation indicator is flashing green. Wait until it lights steadily.



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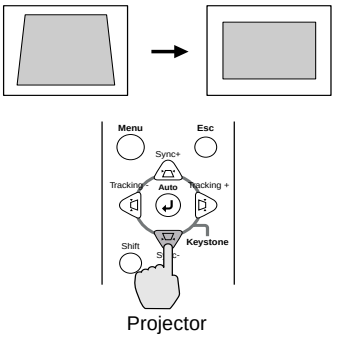
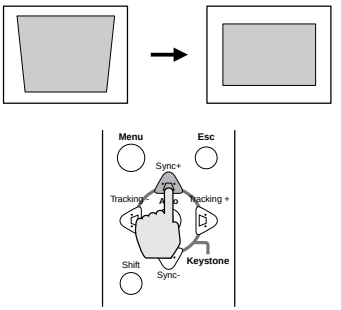
Correcting Keystone Distortion

In some cases it may not be possible to set up the projector so that the setting angle is perpendicular to the position of the screen. In such cases, a type of distortion known as "keystone distortion" may appear in the projected images. If keystone distortion occurs, you can correct it using the [Keystone] buttons on the projector's control panel.

- Correcting vertical keystone distortion

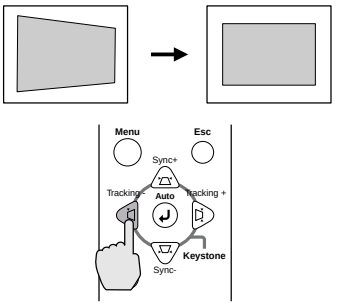


Projector

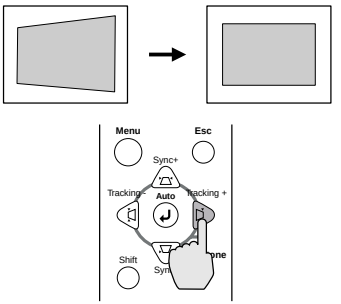


Projector

- Correcting horizontal keystone distortion



Projector



Projector

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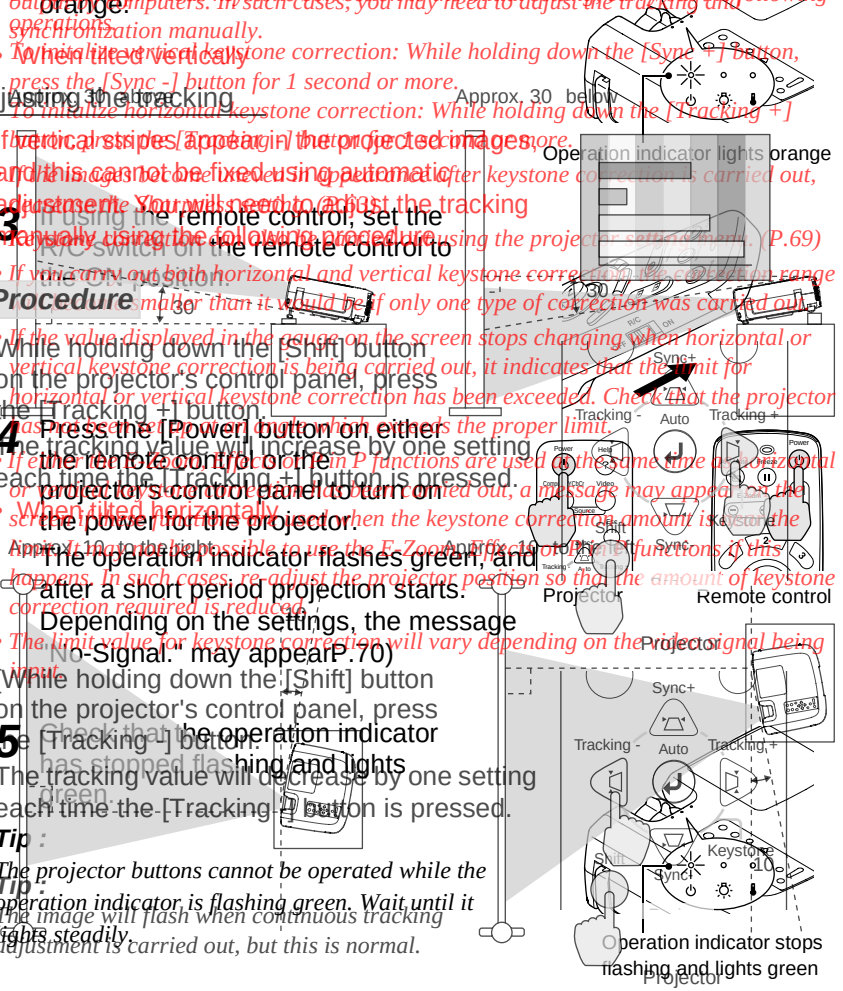
Turning On the Power and Projecting Images

Procedure

1. Turn on the power for all equipment connected to the projector.
   For a video source, press the [Play] button at the video source to start playback if necessary.
2. Check that the operation indicator has stopped flashing and lights orange.
3. Using the remote control, set the R/C switch on the remote control to the ON position.
4. Press the [Power] button on either the remote control or the projector's control panel to turn on the power for the projector.
   The operation indicator flashes green, and after a short period projection starts.
   Depending on the settings, the message "No-Signal." may appear(P.70)
5. Check that the operation indicator has stopped flashing and lights green.

Tip :

The projector buttons cannot be operated while the operation indicator is flashing green. Wait until it lights steadily.



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Adjusting the Image Quality

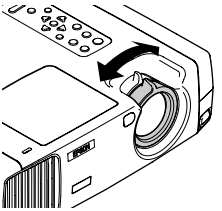
The quality of the screen images can be adjusted as follows.

Focusing the Screen Image

Procedure

Turn the focus ring to adjust the image focus.

Turn the focus ring of the projector until the projected images are in proper focus.



Tip :

- *If the surface of the lens is dirty or misted over as a result of condensation, it may not be possible to adjust the focus correctly. If this happens, clean or de-mist the lens. (P.91)*
- *If the projector is positioned outside the normal projecting range of 34.25 – 491.34 inches (0.87 – 12.48 m), it may not be possible to obtain the correct focus. If you have trouble obtaining the correct focus, check the projection distance.*

Adjusting Computer Images

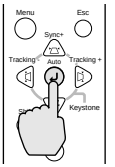
Automatic adjustment

This procedure adjusts computer images to the optimum settings.
Automatic adjustment involves adjustment of the following three items: Tracking, Display position and Synchronization (Sync).

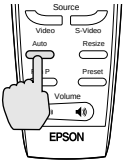
Procedure

While an image is being projected from the computer, press the [Auto] button on either the remote control or the projector's control panel.

The screen will appear black while the adjustment is being made.



Projector



Remote control

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Turning On the Power and Projecting Images

Procedure

1 Turn on the power for all equipment connected to the projector.

For a video source, press the [Play] button at the video source to start playback if necessary.

2 Check that the operation indicator has stopped flashing and lights orange.

3 While holding down the [Shift] button on the projector's control panel, press the [Tracking +] button.

The tracking value will increase by one setting each time the [Tracking +] button is pressed.

4 Press the [Power] button on either the remote control or the projector's control panel to turn on the power for the projector.

The operation indicator flashes green, and after a short period projection starts.

Depending on the settings, the message "No-Signal." may appear. P.70)

[While holding down the [Shift] button on the projector's control panel, press the [Tracking -] button.

5 Check that the operation indicator has stopped flashing and lights green.

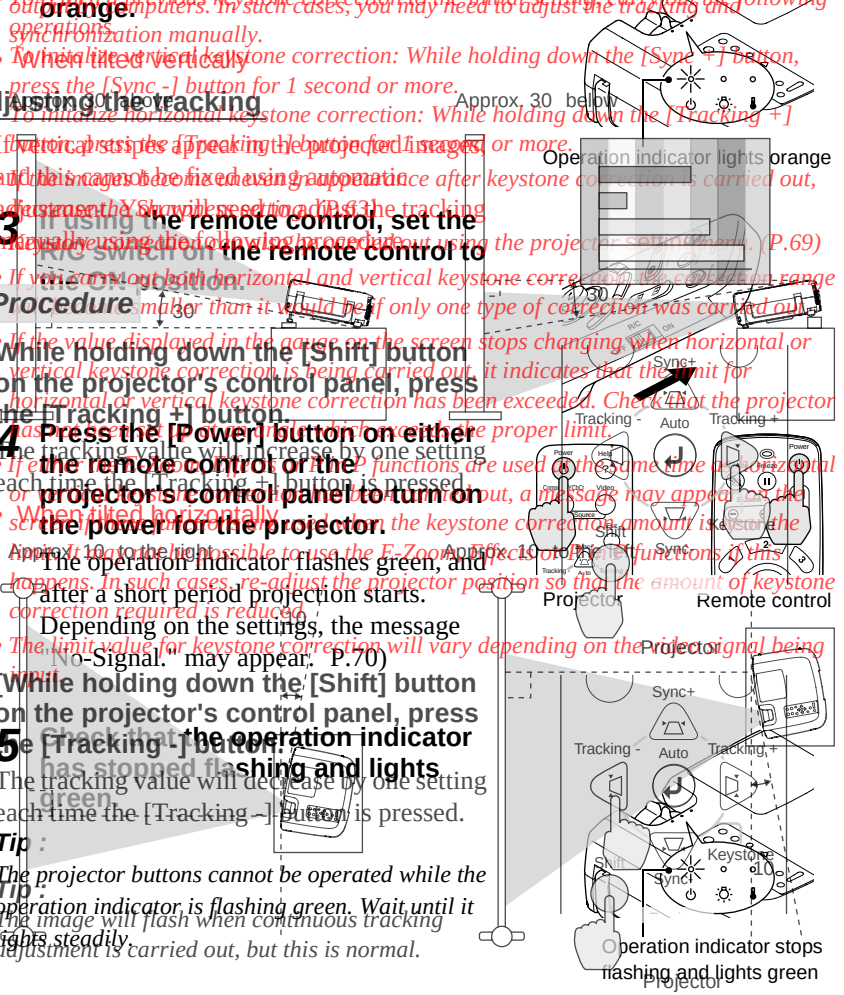
The tracking value will decrease by one setting each time the [Tracking –] button is pressed.

Tip :

The projector buttons cannot be operated while the operation indicator is flashing green. Wait until it lights steadily.

Tip :

The image will flash when continuous tracking adjustment is carried out, but this is normal.



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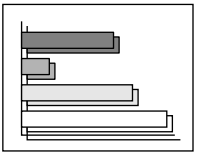
Adjusting the synchronization

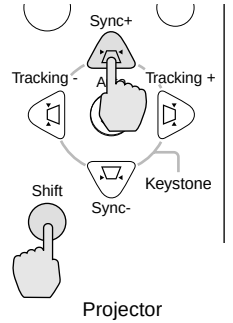
If flickering, fuzziness or interference appear in images that are input from the computer, and this cannot be fixed using automatic adjustment, you will need to adjust the synchronization manually using the following projection.



Procedure

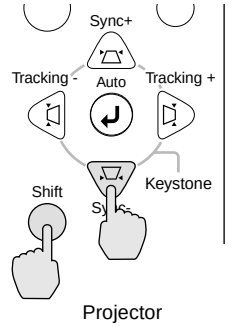
While holding down the [Shift] button on the projector's control panel, press the [Sync +] button.

The synchronization value will increase by one setting each time the [Sync +] button is pressed.



While holding down the [Shift] button on the projector's control panel, press the [Sync -] button.

The synchronization value will decrease by one setting each time the [Sync -] button is pressed.



Tip :

- *If you do not adjust the tracking first and then adjust the synchronization, it will not be possible to get the best adjustment results. Incorrect tracking adjustment may not be noticeable with some types of picture. However, pictures with lots of lines and shading will tend to show incorrect tracking adjustments more clearly, so be sure to check the tracking adjustment first.*
- *It may also be possible to fix flickering and fuzziness by adjusting the brightness, contrast, sharpness and keystone correction settings.*

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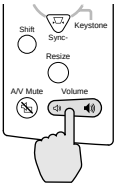
Adjusting the Volume

You can adjust the volume for the sound from the projector's internal speaker or from the external speakers that are connected to the projector.

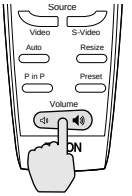
Procedure

Press the [Volume ,] button on either the remote control or the projector's control panel.

When the button is pressed to [ ], the volume increases, and when the button is pressed to [ ], the volume decreases. The volume gauge appears on the screen when the volume has been adjusted.



Projector



Remote control

Tip :

When the sound is being output to external speakers, the volume from the external speakers is adjusted.

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Advanced Operations

This chapter describes functions for enhancing the projection of images, and how to use the setting menus.

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Functions for Enhancing Projection

This section describes the various useful functions that can be used to enhance projection.

List of Functions

The following functions are available for enhancing projection.

Function	Description	Reference page
A/V Mute	Momentarily pauses both the image and the sound.	P.52
Freeze	Pauses only the projected image.	P.54
Wide-screen Projection	When projecting video images, changes the aspect ratio from 4:3 to 16:9 to view the images in wide screen format.	P.55
E-Zoom	Enlarge a part of the image.	P.56
Effect 1	Lets you use a pointer to indicate areas of an image, or stamps the pointer icon on a specified part of the image.	P.58
Effect 2	Spotlights a specified part of the image.	P.58
Effect 3	Draws a colored bar over the image.	P.58
P in P	Displays a sub-screen containing a video image over part of a computer or component video image.	P.60

Function Details

Detailed descriptions of the above functions are given below.

A/V Mute

This function momentarily pauses the image and sound.
For example, it can be used when you do not want to show viewers details of operations such as selecting different files while computer images are being projected.
However, if you use this function when projecting moving images, the images and sound will still continue to be played back by the source, and you cannot return to the point where the mute function was activated.

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Freeze

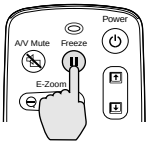
This function pauses only the projected images. The sound keeps playing without pausing.
Furthermore, the image will continue to be played back by the source.

Procedure

Press the [Freeze] button on the remote control.

The images will then be paused.

To continue projecting the images, either press the [Freeze] button again or press the [Esc] button.



Remote control

Tip :

- *Pressing the [Freeze] button also clears menu displays, effects functions and help messages.*
- *If you press the [Freeze] button while using the E-Zoom function or after a P in P sub-screen has been set, all of the screen displays will be paused.*

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Procedure

1 Press the [Menu] button on either the remote control or the projector's control panel.

Main menu will be displayed.

2 Select a menu item.

If using the remote control, press the [Sync +] or [Sync -] button to select the desired menu item.

If using the control panel, press the top or bottom of the ↕ button.

3 Confirm the selection.

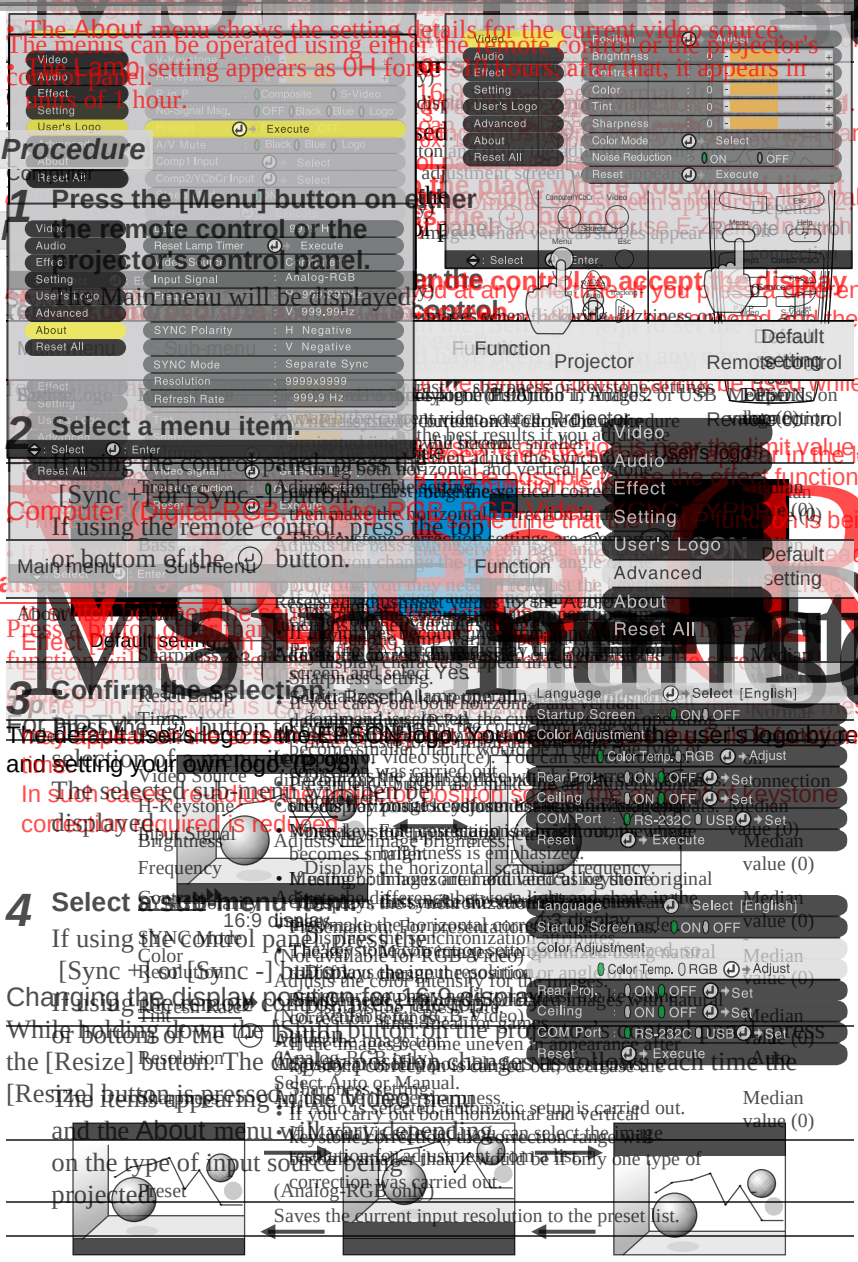
The selected sub-menu will be displayed.

4 Select an item.

If using the control panel, press the [Sync +] or [Sync -] button.

While holding down the [Resize] button, press the top or bottom of the ↕ button on the projector's control panel.

The items appearing in the menu differ depending on the type of input source being projected.



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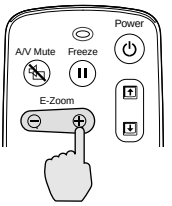
E-Zoom

This function lets you enlarge and reduce a part of projected images such as graphs and tables.

Procedure

1 Press the [E-Zoom] button on the remote control.

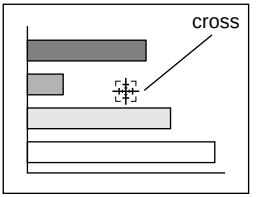
A cursor (cross) indicating the center point for the area to be enlarged will appear on the screen.



Remote control

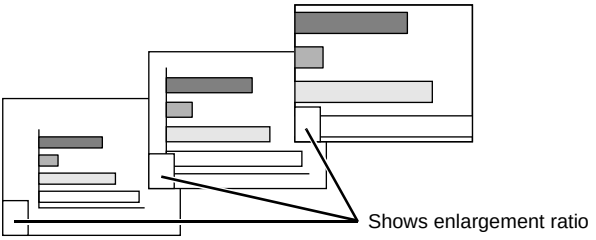
2 Move the cross to the area of the image that is to be enlarged or reduced.

Tilt the ⊕ button on the remote control to move the cross.



3 When the [E-Zoom] button is pressed to (⊕), the image is enlarged with the cross as its center. When it is pressed to (⊖), the enlarged picture is then reduced.

The enlargement ratio will appear at the bottom-left of the screen. You can scroll around the image by tilting the ⊕ button.



To cancel the zoom, press the [Esc] button.

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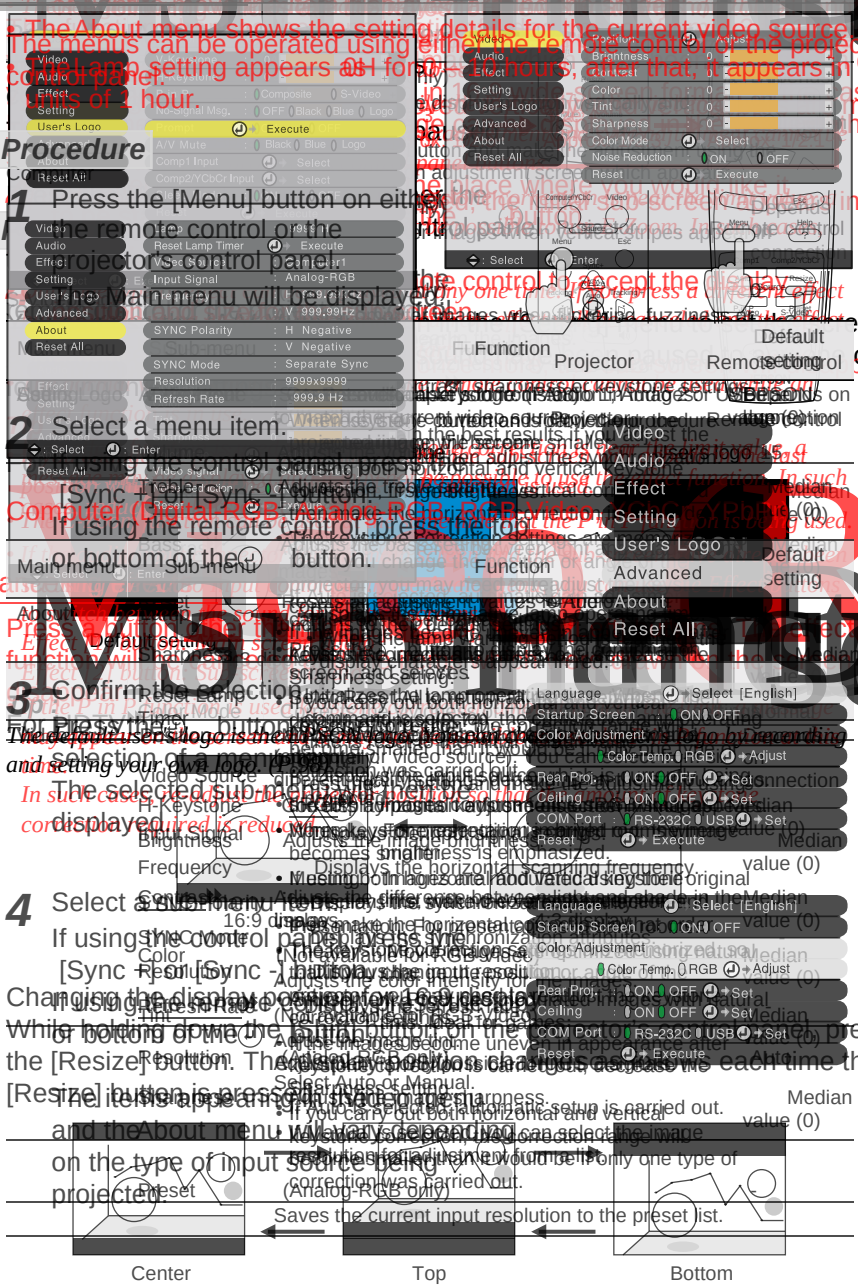
Procedure

1. Press the [Menu] button on either the remote control or the projector control panel.
   The Main menu will be displayed.
2. Select a menu item.
   If using the control panel, push the [Sync +] or [Sync −] button.
   If using the remote control, push the [▲] or [▼] button.
3. Confirm the selection.
   The selected sub-menu appears.
4. Select a sub-menu item.
   If using the control panel, push the [Sync +] or [Sync −] button.
   If using the remote control, push the [▲] or [▼] button.



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Effects

The [1], [2] and [3] buttons on the remote control can be used to add display effects to images that are being projected during a presentation. This can be used to emphasize particular parts of the images.

Effect 1 [1]	Pointer/ stamp	An icon appears on the screen and it can be moved around like a pointer. In addition, the icon can be made to appear on the image as a stamp.
Effect 2 [2]	Spotlight	Parts of the projected image can be spotlighted.
Effect 3 [3]	Bar	Bars (horizontal and vertical lines) can be drawn on top of the projected image.

Procedure

1 Press the [1], [2] or [3] button on the remote control to select the type of effect.

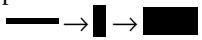
The following icon or bar appears at the center of the projected image.
[1]: Pointer icon
[2]: Spotlight
[3]: Bar

Remote control

2 Select the type of pointer icon or bar.

The pointer icon changes in the following order each time the [1] button is pressed.

The size of the spotlight changes in the following order each time the [2] button is pressed.
Medium → Large → Small
The type of bar changes in the following order each time the [3] button is pressed.



Tip :

*You can use the **Effect** menu to set the type of icon or bar and the size and display sequence for the spotlight.*

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Picture in Picture (P in P)

This function lets you simultaneously display computer or component video images on the main screen and video images (Video or S-Video) in a sub-screen. The video images in the sub-screen can be selected using the **P in P** command in the **Setting** menu. (P.70)

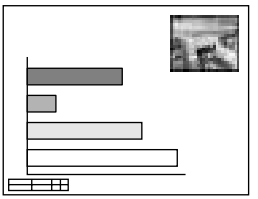
Tip :

- *The P in P function cannot be used if the refresh rate for the computer images is set to interlaced.*
- *The P in P function cannot be used when TV (525i) component video images are being projected.*

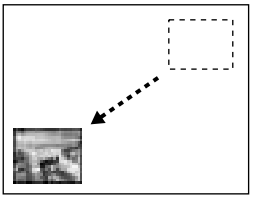
Procedure

1 **Connect all components, set the type of sub-screen using the Setting menu, and then press the [P in P] button on the remote control.**

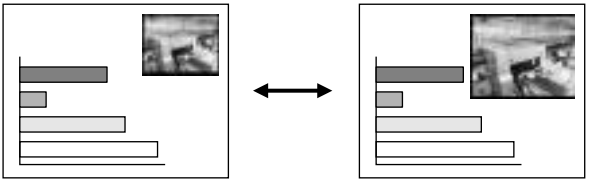
The sub-screen will appear at the top-right of the screen, and the operation guide will appear at the bottom-left of the screen.



2 **Tilt the ⊙ button on the remote control to change the position of the sub-screen.**



3 **Press the [E-Zoom] button on the remote control to change the size of the sub-screen.**



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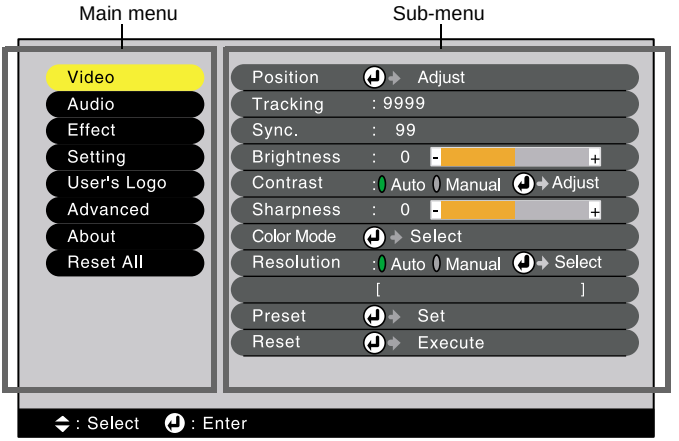
Using the Projector Menu Functions

The setting menus can be used to carry out a variety of settings and adjustments.
The menus have a hierarchical structure, with a main menu that is divided into sub-menus, which are further divided into other sub-menus.
Refer to “Using the Menus” (P.75) for details on using the menus.

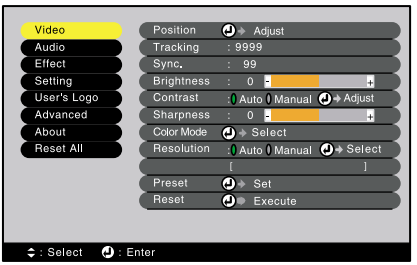


List of Functions

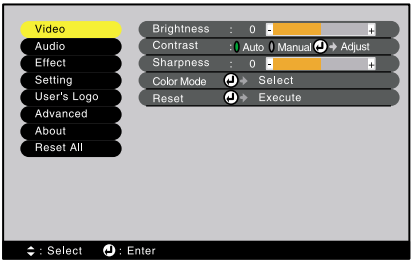
Video menu

- The functions in the **Video** menu cannot be adjusted while no video signal is being input.
- The functions which appear in the **Video** menu will change depending on the type of input source being used for the video signal. Functions which are not available in the **Video** menu for a particular input source cannot be adjusted.

Analog-RGB



Digital-RGB



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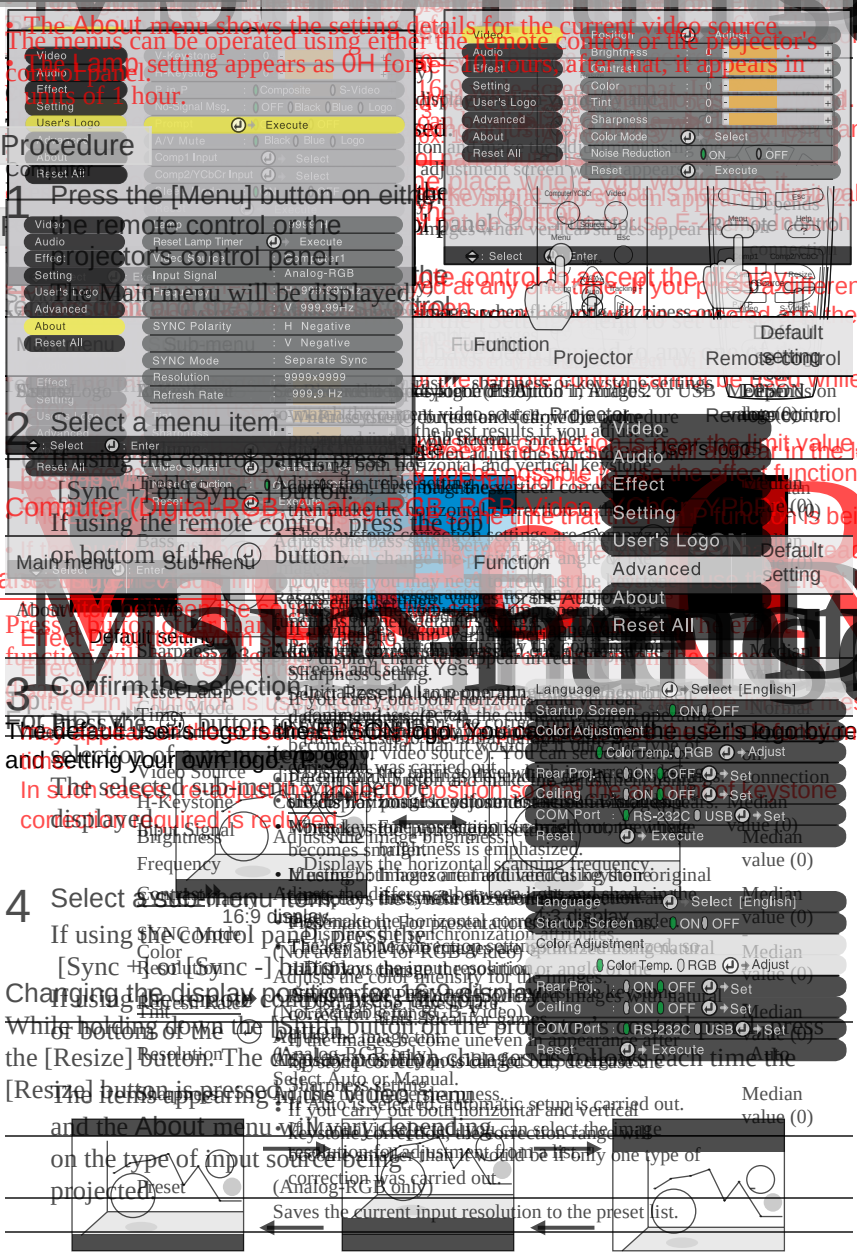

Procedure

1. Press the [Menu] button on either the remote control or the projector's control panel.
   Main menu will be displayed.
2. Select a menu item.
   If using the control panel, press the [Sync +] or [Sync -] button.
   If using the remote control, press the top or bottom of the ⊙ button.
3. Confirm the selection.
   The selected sub-menu will be displayed.
4. Select a sub-menu item.
   If using the control panel, press the [Sync +] or [Sync -] button.
   If using the remote control, press the top or bottom of the ⊙ button.

Changing the display position for the projected image

While holding down the [Resize] button on the projector's control panel or the remote control, press the ⊙ button. The projected image will change each time the [Resize] button is pressed.

The items appearing in the menu screen and the About menu screen will differ depending on the type of input source being projected.

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Main menu	Sub-menu	Function	Default setting
Video	Reset	Resets all adjustment values for the **Video** menu functions to their default settings. • Press the ⏎ button to display the confirmation screen, and select **Yes**. • Select **Reset All** to return all menu settings to their default settings. (P.74)	-

* If set to **sRGB**, the color temperature for the **Color Adjustment** command in the **Advanced** menu will be set to 6500K.

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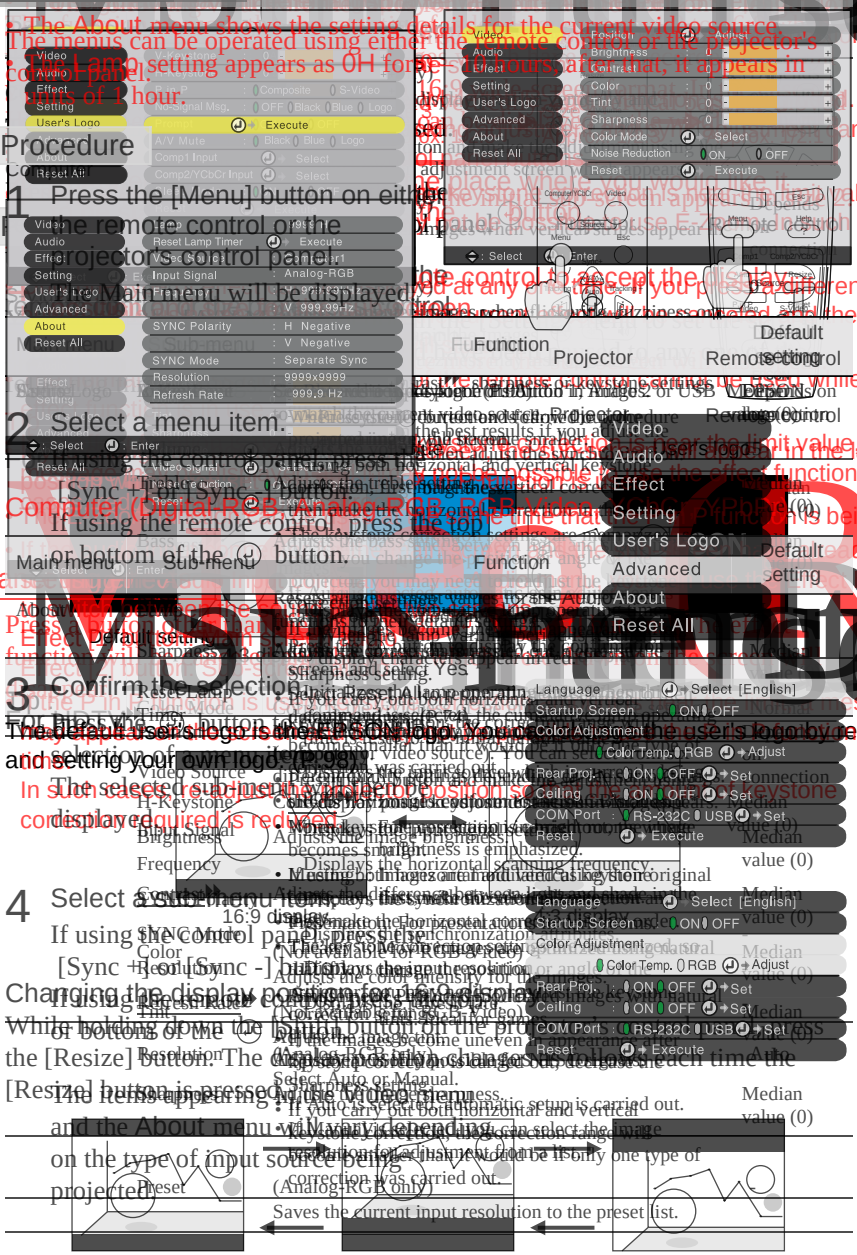

Procedure

1. Press the [Menu] button on either the remote control or the projector's control panel.
   Main menu will be displayed.
2. Select a menu item.
   If using the control panel, press the [Sync +] or [Sync -] button.
   If using the remote control, press the top or bottom of the ⊙ button.
3. Confirm the selection.
   The selected sub-menu will be displayed.
4. Select a sub-menu item.
   If using the control panel, press the [Sync +] or [Sync -] button.
   If using the remote control, press the top or bottom of the ⊙ button.

Changing the display position for the projected image

While holding down the [Resize] button on the projector's control panel or the remote control, press the ⊙ button. The projected image will change each time the [Resize] button is pressed.

The items appearing in the menu screen and the About menu screen will differ depending on the type of input source being projected.

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Main menu	Sub-menu	Function	Default setting
Video	Color Mode	Corrects the vividness of the image color. The settings can be saved separately for each type of source (computer or video source). You can select from six different quality settings depending on the surroundings. • sRGB▶▶ : Images conform to the sRGB standard.* • Normal : For presentation in bright rooms where brightness is emphasized. • Meeting : Images are modulated using their original tints, with no color enhancement. • Presentation: For presentations in dark rooms. • Theater : Movie images are optimized using natural tints. The black & white extension function operates to emphasize the gradation differences (color densities) when projecting images in dark or light environments, in order to make the images easier to see. • Amusement: Produced modulated images with natural tints. Ideal for games.	Theater
	Video Signal	Sets the video signal format. • Press the ⏎ button, and choose the setting from the video signal format selection sub-menu which appears. • When set to **Auto**, the video signal format is set automatically, but if projecting signals in PAL (60 Hz) format, the setting needs to be made manually.	Auto
	Noise Reduction	Turns the Noise Reduction function on and off. When set to **ON**, noise is reduced. Ignored when a menu or help screen is being displayed, even when set to ON. The setting becomes effective from the point where the menu or help screen is closed.	ON
	Reset	Resets all adjustment values for the **Video** menu functions to their default settings. • Press the ⏎ button to display the confirmation screen, and select **Yes**. • Select **Reset All** to return all menu settings to their default settings. (P.74)	-

* If set to **sRGB**, the color temperature for the **Color Adjustment** command in the **Advanced** menu will be set to 6500K.

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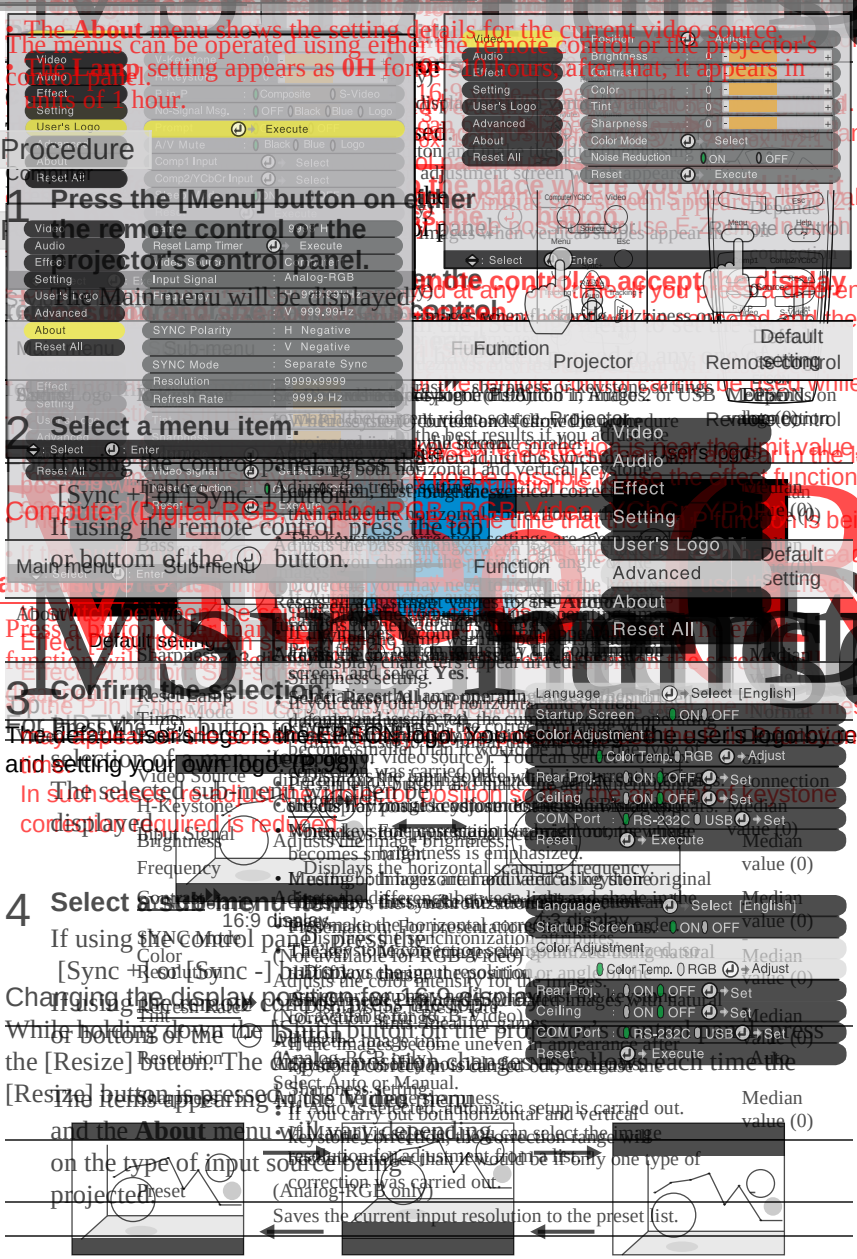
Procedure
1 Press the [Menu] button on either the remote control or the projector's control panel.
Main menu will be displayed.
2 Select a menu item.
[Sync +] or [Sync -]
If using the remote control, press the top or bottom of the button.
Main menu
Sub-menu
Function
Projector
Remote control
Default setting
3 Confirm the selection.
The selected sub-menu will be displayed.
4 Select an item.
If using the control panel, press the [Sync +] or [Sync -] button.
Changing the display position for the projected image
While holding down the [Resize] button on the projector or the [Resize] button on the remote control, press the top or bottom of the button.
The items appearing in the menu differ depending on the type of input source being projected.
Center
Top
Bottom

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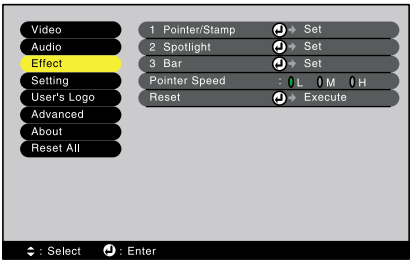
Effect menu



Main menu	Sub-menu	Function	Default setting
Effect	Pointer/Stamp	Sets the three types of pointer icon which appear when the [1] button on the remote control is pressed from the eight available types, and sets the display ratio. • Press the ⏎ button, and choose the setting from the **Pointer/Stamp** sub-menu which appears. • The pointer and stamp function can be used by pressing the [1] button on the remote control. (P.58)	→ →
	Spotlight	Sets the size of the spotlight which appears when the [2] button on the remote control is pressed. • Press the ⏎ button, and choose the setting from the **Spotlight** sub-menu which appears. This selects the sequence of sizes for the spotlight which appear each time the [2] button is pressed. • The spotlight function can be used by pressing the [2] button on the remote control. (P.58)	Size: Medium → Large → Small
	Bar	Sets the color, direction and thickness of the bar which appears when the [3] button on the remote control is pressed. • Press the ⏎ button, and choose the setting from the **Bar** sub-menu which appears. • The bar function can be used by pressing the [3] button on the remote control. (P.58)	→ →
	Pointer Speed	Selects the pointer speed. L: Slow, M: Medium, H: Fast	M
	Reset	Resets all adjustment values for the **Effect** menu functions to their default settings. • Press the ⏎ button to display the confirmation screen, and select **Yes**. • Select **Reset All** to return all menu settings to their default settings. (P.74)	-

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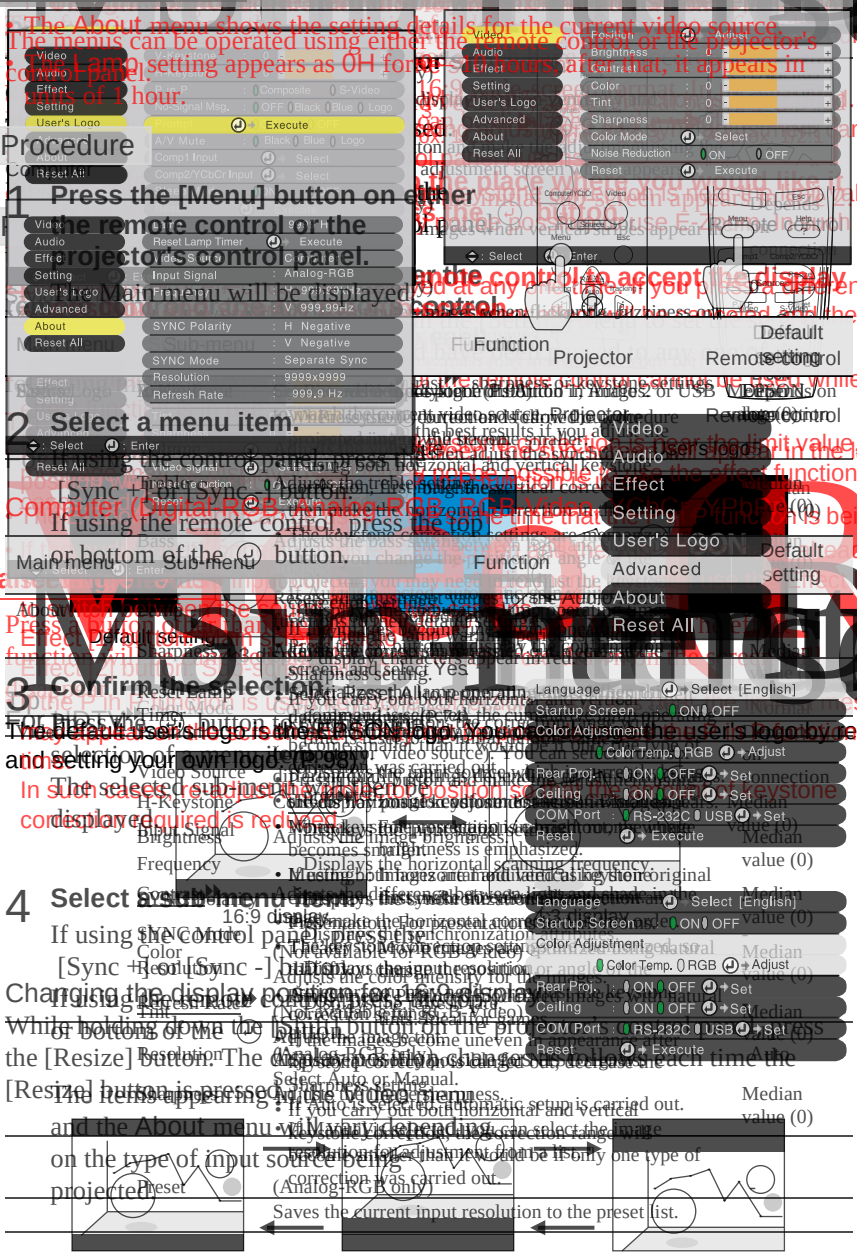
Procedure
1 Press the [Menu] button on either the remote control or the projector's control panel.
Main menu will be displayed.
2 Select a menu item.
[Sync +] or [Sync -]
If using the remote control, press the top or bottom of the button.
Main menu
Sub-menu
Function
Projector
Remote control
Default setting
3 Confirm the selection.
The selected sub-menu will be displayed.
4 Select an item.
If using the control panel, press the [Sync +] or [Sync -] button.
Changing the display position for the projected image
While holding down the [Resize] button on the projector or the [Resize] button on the remote control, press the [Sync +] or [Sync -] button.
The items appearing in the menu screen and the About menu screen depend on the type of input source being projected.
Center
Top
Bottom

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Main menu	Sub-menu	Function	Default setting
Setting	P in P	Sets the input source for the sub-screen of the Picture in Picture function to either Composite Video or S-Video. • The Picture in Picture function can be used by pressing the [P in P] button. (P.60)	Composite
	No-Signal Msg.	Sets the message status and background color at times such as when no video signal is being input. • To change the user's logo, you need to record and set your own logo. (P.98)	Blue
	Prompt	Sets whether the source prompt for the input image is displayed on the screen or not.	ON
	A/V Mute	Sets the screen status when the [A/V Mute] button is pressed. • To change the user's logo, you need to record and set your own logo.	Black
	Comp1 Input	Sets the video signal for Computer 1 input.	Digital-RGB/ Analog-RGB
	Comp2/ YCbCr Input	Sets the video signal for Computer 2 input.	Analog-RGB
	Sleep Mode	Sets the energy saving operation when no video signal is being input. • When set to **ON**, projection stops automatically and the projector changes to sleep mode if no operations are carried out for 30 minutes while the "No-Signal." message is being displayed. (The operation indicator lights orange.) • Projection starts again when the [Power] button is pressed.	ON
	Reset	Returns the adjustment values for the **Setting** menu to their default settings. • Press the ⏎ button to display the confirmation screen, and select **Yes**. • Select **Reset All** to return all menu settings to their default settings.	-

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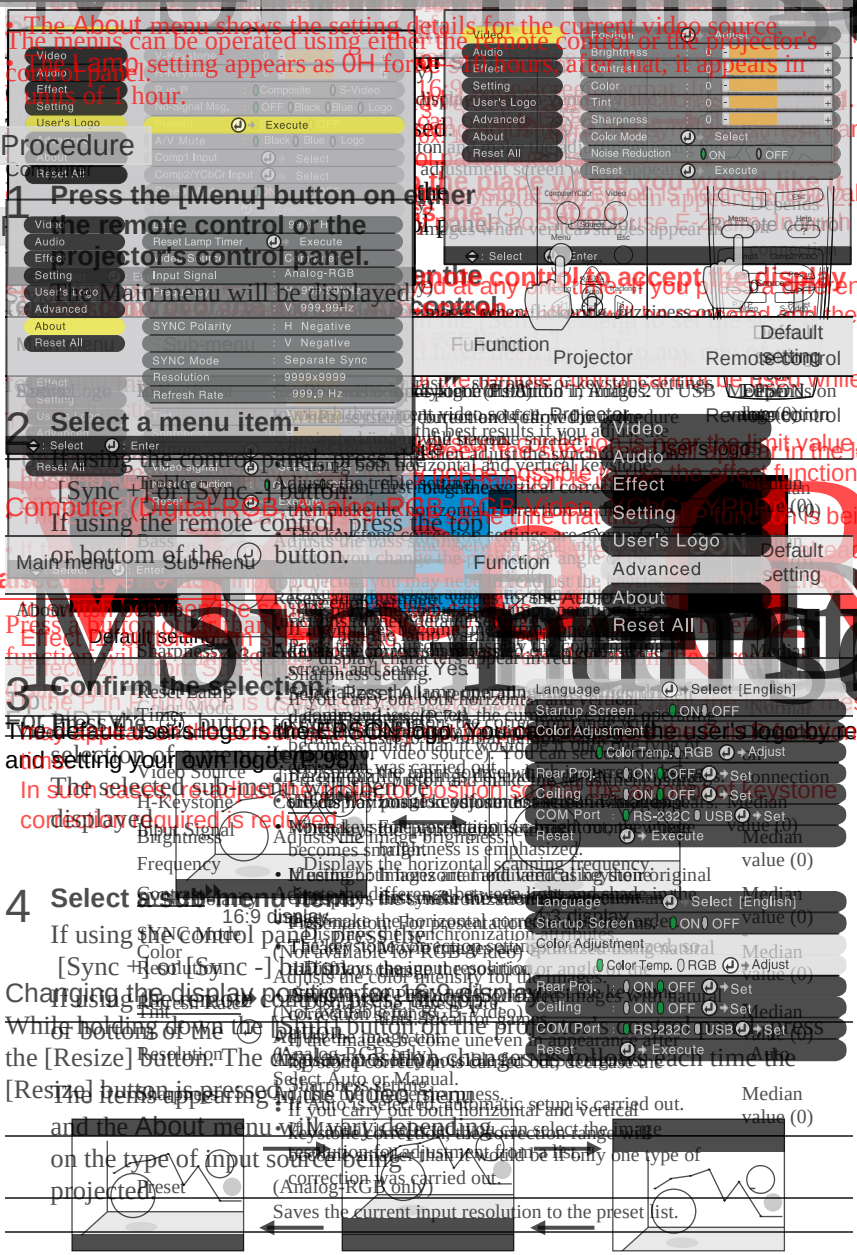
Procedure
1 Press the [Menu] button on either the remote control or the projector's control panel.
Main menu will be displayed.
2 Select a menu item.
[Sync +] or [Sync -]
If using the remote control, press the top or bottom of the button.
Main menu
Sub-menu
Function
Projector
Remote control
Default setting
3 Confirm the selection.
The selected sub-menu will be displayed.
4 Select an item.
If using the control panel, press the [Sync +] or [Sync -] button.
Changing the display position for the projected image
While holding down the [Resize] button on the projector or the [Resize] button on the remote control, press the [Sync +] or [Sync -] button.
The items appearing in the menu screen and the About menu screen depend on the type of input source being projected.
Center
Top
Bottom

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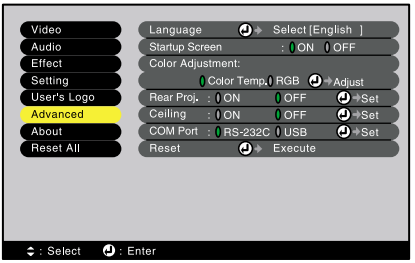
Advanced menu



Main menu	Sub-menu	Function	Default setting
Advanced	Language	Sets the language for message displays. • Press the ⏎ button and select the language from the selection menu that appears.	English
	Startup Screen	Sets whether the startup screen is displayed or not. • To change the user's logo, you need to record and set your own logo.	ON
	Color Adjustment	Adjusts the color temperature and intensity of each RGB color in the image. Color Temp.: Sets the color temperature. • Press the ⏎ button and set the color temperature in the **Color Adjustment** sub-menu. RGB: Sets the color intensity for each RGB (red/green/blue) color in the image. • Press the ⏎ button, select **R** (red), **G** (green) or **B** (blue) in the **Color Adjustment** sub-menu, and make the required setting for each color. • You can adjust the colors while viewing the results on the screen. (This item cannot be selected if **sRGB** has been selected as the **Color Mode** setting in the **Video** menu.)	Color Temp: Depends on connection
	Rear Proj.	Use when projecting images from behind a translucent screen. When set to **ON**, the projected images are horizontally reversed.	OFF
	Ceiling	Use when installing the projector to a ceiling. When set to **ON**, the projected images are horizontally and vertically reversed.	OFF
	COM Port	Switches between Control (RS-232C) and USB serial communication.	RS-232C
	Reset	Resets all adjustment values for the **Advanced** menu functions to their default settings. • Press the ⏎ button to display the confirmation screen, and select **Yes**. • Select **Reset All** to return all menu settings to their default settings.	-

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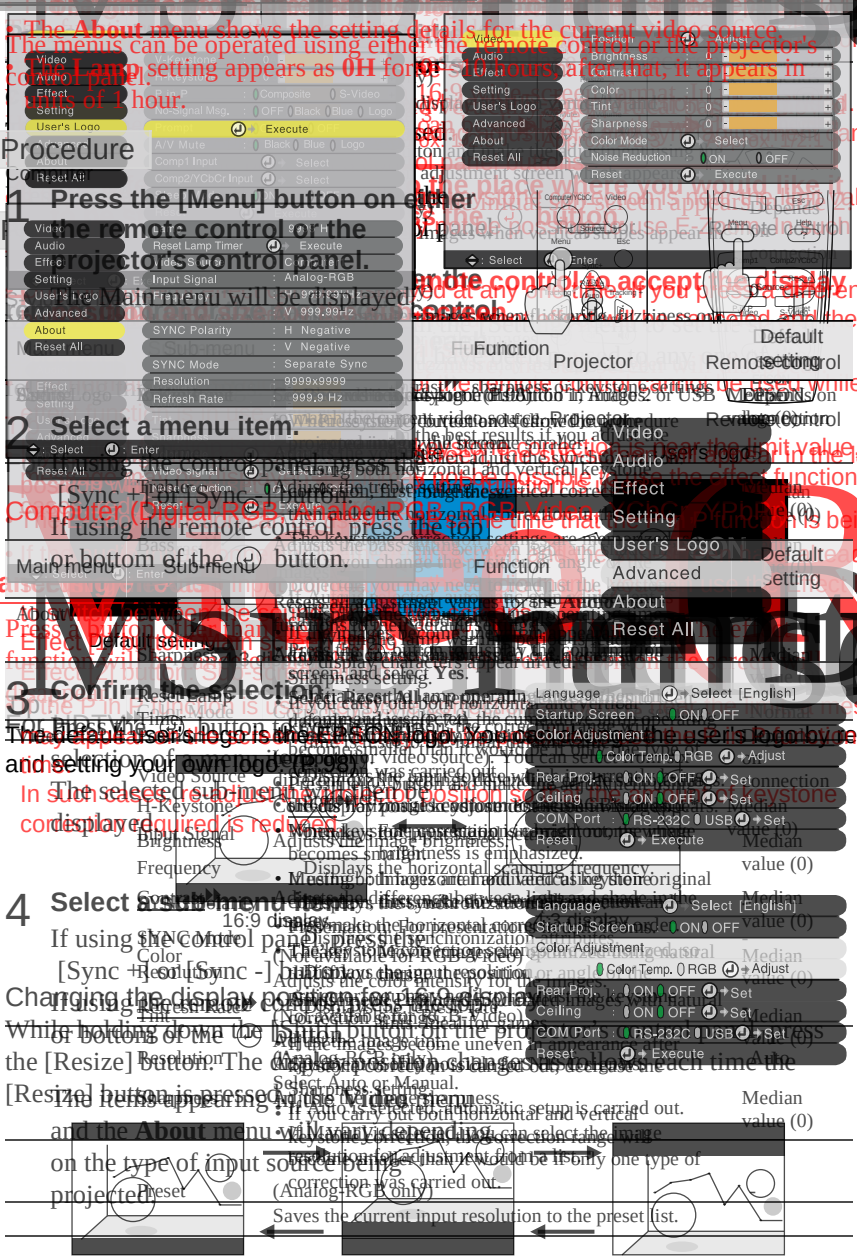
Procedure
1 Press the [Menu] button on either the remote control or the projector's control panel.
Main menu will be displayed.
2 Select a menu item.
[Sync +] or [Sync -]
If using the remote control, press the top or bottom of the button.
Main menu
Sub-menu
Function
Projector
Remote control
Default setting
3 Confirm the selection.
The selected sub-menu will be displayed.
4 Select an item.
If using the control panel, press the [Sync +] or [Sync -] button.
Changing the display position for the projected image
While holding down the [Resize] button on the projector or the [Resize] button on the remote control, press the top or bottom of the button.
The items appearing in the menu differ depending on the type of input source being projected.
Center
Top
Bottom

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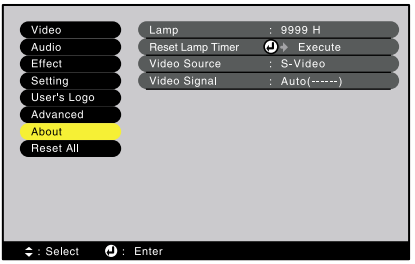
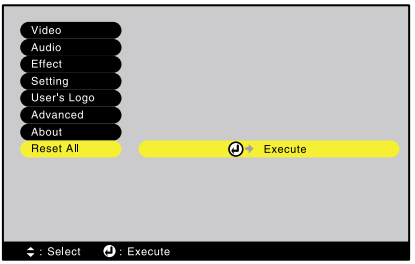
Video



Video (S-Video, Video)

Main menu	Sub-menu	Function	Default setting
About	Lamp	Displays the cumulative lamp operating time. • When the lamp warning period is reached, the display characters appear in red.	0H
	Reset Lamp Timer	Initializes the lamp operating time. When this command is selected, the cumulative lamp operating time is reset to the initial default value.	-
	Video Source	Displays the input source which is currently being projected.	
	Video Signal	Displays the video signal format.	Auto

Reset All menu



Main menu	Sub-menu	Function	Default setting
Reset All	Execute	Resets all items in all setting menus to their default settings. • Press the ⏎ button to display the confirmation screen, and select **Yes**. • Select **Reset** in an individual menu to reset only the settings for the items in each sub-menu. • The User's Logo, Lamp and Language settings will not return to their default settings.	-

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Procedure

1. **Press the [Menu] button on either the remote control or the projector's control panel.**
   Main menu will be displayed.
2. **Select a menu item.**
   If using the remote control, press the top or bottom of the ⊛ button.
3. **Confirm the selection.**
   If using the remote control, press the [Enter] button.
   The selected sub-menu will be displayed.
4. **Select an item.**
   If using the control panel, press the [Sync +] or [Sync -] button.
   While holding down the [Resize] button on the projector or the [Resize] button on the remote control, press the [Sync +] or [Sync -] button.
   The items appearing in the sub-menu change each time the [Resize] button is pressed.
   The items appearing in the sub-menu differ depending on the type of input source being projected.

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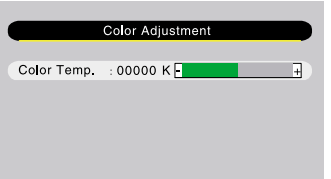
5 Select a setting value.

If using the control panel, press the [Tracking -] or [Tracking +] button.
If using the remote control, press the left or right edge of the ↵ button.



Tip :

- *Sub-menu items which cause another sub-menu to be displayed when they are selected have ↵ (Enter) after them. If you select such menu items and press the ↵ button, you can then change the settings in the next sub-menu which appears.*
- *Refer to "List of Functions" for details on the functions of each menu item. (P.62)*

6 Select other menu items in the same way.

Repeat steps 2 to 5 to change the setting for other menu items. To return to a previous menu, press the [Esc] button.

7 Close the menu.

Press the [Menu] button.

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Appendices

This chapter provides information on troubleshooting and maintenance procedures to ensure the best level of performance for the projector for a long time.

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Troubleshooting

This section describes how to identify problems and what to do if a problem is found.

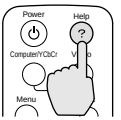
Using the Help

If a problem occurs with the projector, the Help function uses on-screen displays to assist you in solving the problem. It uses a series of menus in a question and answer format.

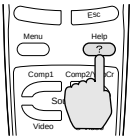
Procedure

1 **Press the [Help] button on either the remote control or the projector's control panel.**

The Help menu will be displayed.



Projector

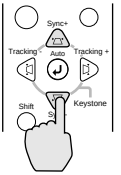


Remote control

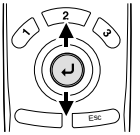
2 **Select a menu item.**

If using the control panel, the [Sync +] and [Sync -] buttons function as the left and right keys.

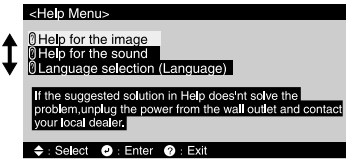
If using the remote control, press the top or bottom of the ↵ button.



Projector



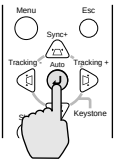
Remote control


<Help Menu>
Help for the image
Help for the sound
Language selection (Language)
If the suggested solution in Help does'nt solve the problem,unplug the power from the wall outlet and contact your local dealer.
: Select : Enter : Exit

3 **Confirm the selection.**

Press the ↵ button to confirm the selection of a menu item.

You can press the [Esc] button to return to the previous menu.



Projector

Remote control

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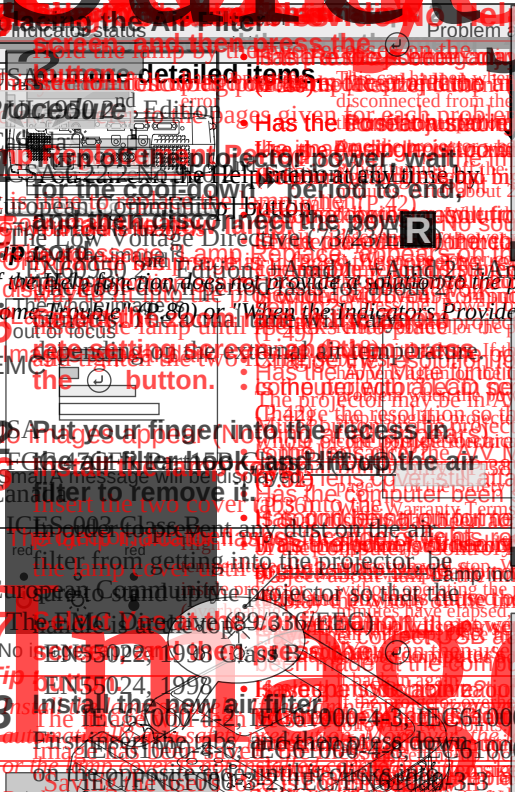
Safety guide

Replacing the Air Filter

Procedure

1. Turn off the projector power, wait for the cool-down period to end, and then disconnect the power plug from the outlet.
2. Put your finger into the recess in the air filter holder and pull up the air filter to remove it.
3. Install the new air filter.



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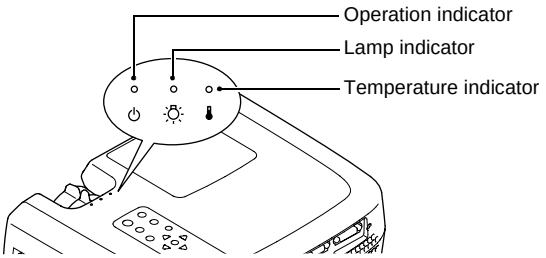
When Having Some Trouble

If you are having a problem with the projector, first check the projector's indicators.
The projector is provided with the following three indicators. These indicators alert you to problems with projector operation.



The following tables show what the indicators mean and how to remedy problems that they indicate.

● : lit ☼ : flashing ○ : off

Indicator status	Projector status	Problem and remedy	Reference page
red ● red ☼ red ☼	Internal problem	Stop using the projector, disconnect the power cord from the electrical outlet, and contact your dealer or the nearest address provided on page 11 of the Safety Instructions/World-Wide Warranty Terms.	
red ● ○ red ☼	Fan problem/ Sensor problem	Stop using the projector, disconnect the power cord from the electrical outlet, and contact your dealer or the nearest address provided on page 11 of the Safety Instructions/World-Wide Warranty Terms.	
red ● red ● ○	Lamp problem	Replace the lamp with a new one. When replacing the lamp, check that the lamp and the lamp cover are securely installed. If the lamp or lamp cover is not securely installed, the projector power will not turn on.	P.94

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Safety

Replacing the Air Filter

Use the detailed items in the procedure below to replace the air filter.

1 Turn off the projector and disconnect the power cable.

Make sure that the cooling fans have stopped completely before proceeding. Allow the projector to cool down for at least 5 minutes.

2 Put your finger into the recess in the air filter hook, and then pull the filter out of the projector.

3 Install the new air filter.

First insert the tabs, and then press down on the filter.

Disposal of used air filters

Dispose of used air filters properly in accordance with your local regulations.

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Indicator status	Projector status	Problem and remedy	Reference page
red / orange	High-speed cooling in progress	(This is not an abnormality, but if the temperature rises too high again, projection will stop automatically.) • Set the projector up in a place which is well-ventilated, and so that the air inlet and exhaust vents are clear. • Clean the air filter.	P.18 P.92
orange	Lamp will soon need to be replaced.	Have a new replacement lamp ready. The lamp service life can become shorter than normal as a result of the usage conditions, and so the lamp should be replaced as soon as possible. * The appearance of the operation indicator at this time will vary depending on the status of the projector.	P.94
orange	Standby condition	(No abnormality) Projection starts when the [Power] button is pressed.	P.37
green	Warm-up in progress	(No abnormality) Wait for a short while. The indicator will stop flashing and light with a green color.	P.37
green	Projecting in progress	(No abnormality)	P.37
orange	Cool-down in progress	(No abnormality) • Wait for a short while. The cool-down ▶▶ (lamp cooling operation) period lasts for about 2 minutes. The actual time will vary depending on the external air temperature. • The [Power] button will not operate during the cool-down period. When cool-down is complete, the indicator will stop flashing and light orange. You can then use the [Power] button.	P.39

Tip :

- *If the projector is not operating properly even though the indicators are all showing normal, refer to "When the Indicators Provide No Help" on the following page.*
- *If an indicator is showing a status which does not appear in the previous tables, contact your dealer or the nearest address provided on page 11 of the Safety Instructions/World-Wide Warranty Teams.*

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Safety

Replacing the Air Filter

Procedure

1. Turn off the projector power, wait for the cool-down period to end, and then disconnect the power cord.
2. Put your finger into the recess in the air filter hook, and lift up the air filter to remove it.
3. Install the new air filter.
   First insert the tabs, and then press down on the other side.
4. Reset the air filter usage time.
   Select the **Reset All** - **Execute** (P.74) item in the Setting menu.

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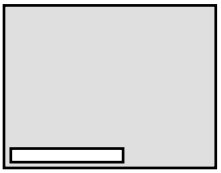
No images appear (Messages do appear)

"Not Supported" is displayed.

- Check the mode which corresponds to the frequency of the image signals being output from the computer. Refer to the documentation provided with your computer for details on changing the resolution and frequency of the image signals being output from the computer. (P.105)
- Does the input signal match the connected source? Use the **Comp1 Input** or **Comp2/YCbCr Input** command in the **Setting** menu to select the signal format that matches the connected source.
  For Comp1: Digital-RGB,Analog-RGB,RGB-Video
  For Comp2: Analog-RGB,RGB-Video,YCbCr,YPbPr
  (P.70)



"No-Signal." is displayed.

- Are the cables connected correctly? (P.19 – 33)
- Has the correct video input port been selected? Press the [Computer/YCbCr] or [Video] button on the projector's control panel or the [Comp1], [Comp2/YCbCr], [Video] or [S-Video] button on the remote control to change the image source. (P.38)
- Is the power for the computer or video source turned on? (P.37)
- If a laptop computer or a computer with a LCD screen has been connected to the projector, it is necessary to output the video signals to the projector rather than to the screen.
  Normally video signals are output to only the computer's LCD screen, so you need to change the output to an external destination. For some computer models, when the image signals are output externally, they no longer appear on the LCD screen. For details, refer to the section of the documentation provided with your computer under a heading such as "External output", "Connecting an external monitor" or similar. (P.38)

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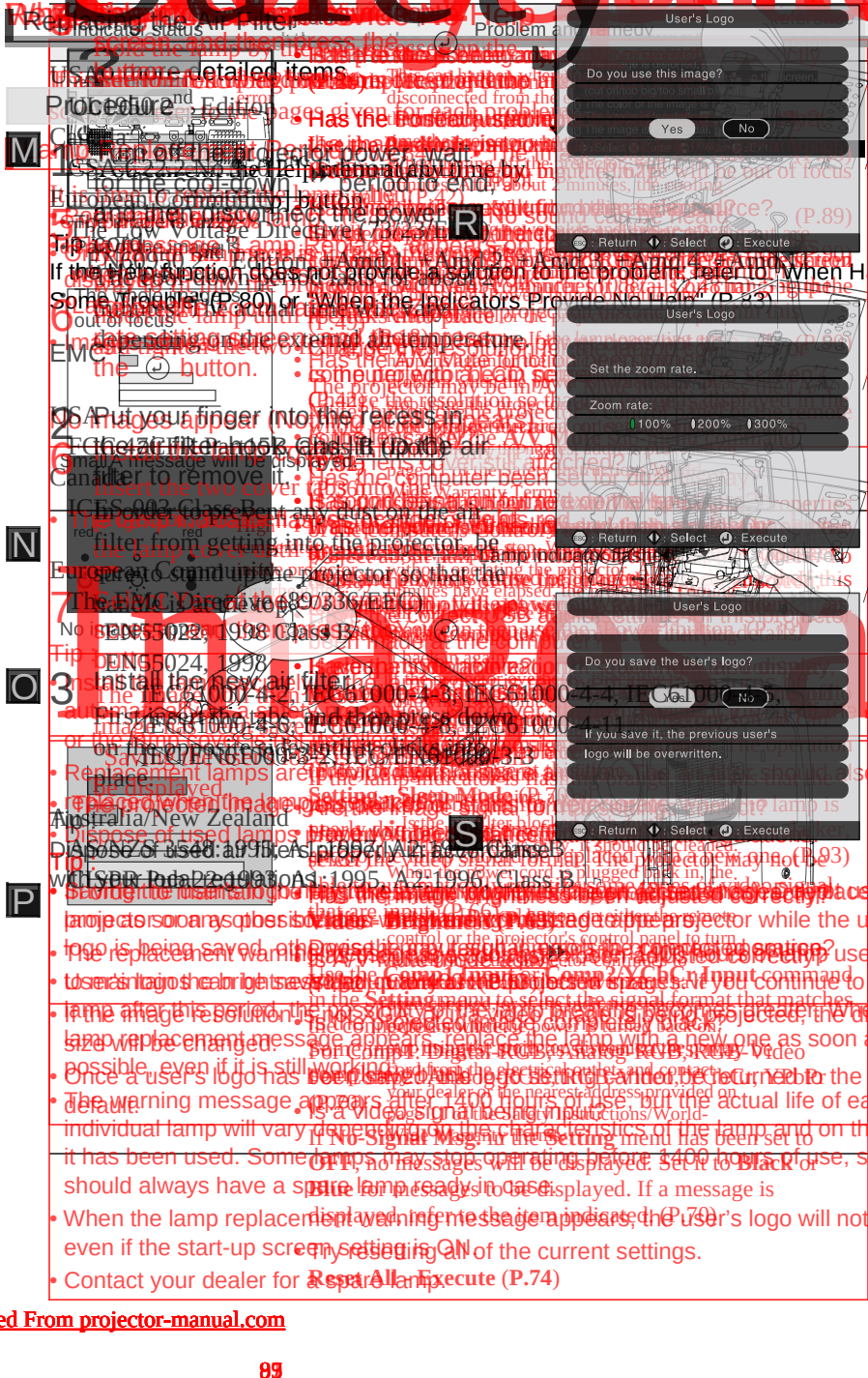
Safety



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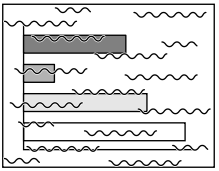

- Image is distorted
- Image contains interference

- Are the cables connected correctly?
  (P.19 – P.33)
- Has the correct resolution been selected?
  Set the computer so that the signals that are output are compatible with this projector. Refer to the documentation provided with your computer for details on changing the settings. (P.105)
- Have the synchronization, tracking and display position been adjusted correctly?
  Press the [Auto] button to adjust these settings. You can also use the menus to make the adjustment. (P.46, 63)
- Is an extension cable being used?
  If an extension cable is used, electrical interference may increase. Use the accessory cables provided, or connect a signal amplifier and see if this helps.
- Are the image signal format settings correct?
  Use the **Video Signal** command in the **Video** menu to select the video signal format. The projector may not be able to automatically identify some types of video signal that are input. (P.66)
- Does the input signal match the connected source?
  Use the **Comp1 Input** or **Comp2/YCbCr Input** command in the **Setting** menu to select the signal format that matches the connected source.
  For Comp1: Digital-RGB, Analog-RGB, RGB-Video
  For Comp2: Analog-RGB, RGB-Video, YCbCr, YPbPr
  (P.70)

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Safety

Replacing the Air Filter

Procedure

1. Turn off the projector power, wait for the cool-down period to end, and then disconnect the power cord.
2. Put your finger into the recess in the air filter hook, and lift up the air filter to remove it.
3. Install the new air filter.
   First insert the tabs, and then press down on the other side.
4. Reset the air filter usage time.
   Select the **Reset All** - **Execute** (P.74) item in the Setting menu.

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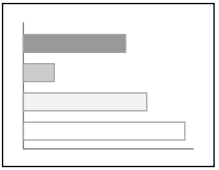
The image colors are not right



- Has the image brightness been adjusted correctly?
  Video - Brightness (P.63)
- Are the cables connected correctly?
  (P.19 – P.33)
- Has the image contrast been adjusted correctly?
  Video - Contrast (P.63)
- Has the color been adjusted correctly?
  Video - Color Mode (P.63)
- Have the color intensity and tint been adjusted correctly?
  (The colors may not exactly match the colors in the image on the computer screen or LCD screen, but this is normal and is not the sign of a problem.)
  Video - Color (P.65)
  Video - Tint (P.65)
- Is the lamp due for replacement?
  If the lamp indicator is flashing orange, it means that the lamp will soon be due for replacement. When the lamp is nearly due for replacement, the image will become darker, and so the lamp should be replaced with a new one. (P.93)
- Does the input signal match the connected source?
  Use the **Comp1 Input** or **Comp2/YCbCr Input** command in the **Setting** menu to select the signal format that matches the connected source.
  For Comp1: Digital-RGB, Analog-RGB, RGB-Video
  For Comp2: Analog-RGB, RGB-Video, YCbCr, YPbPr
  (P.70)

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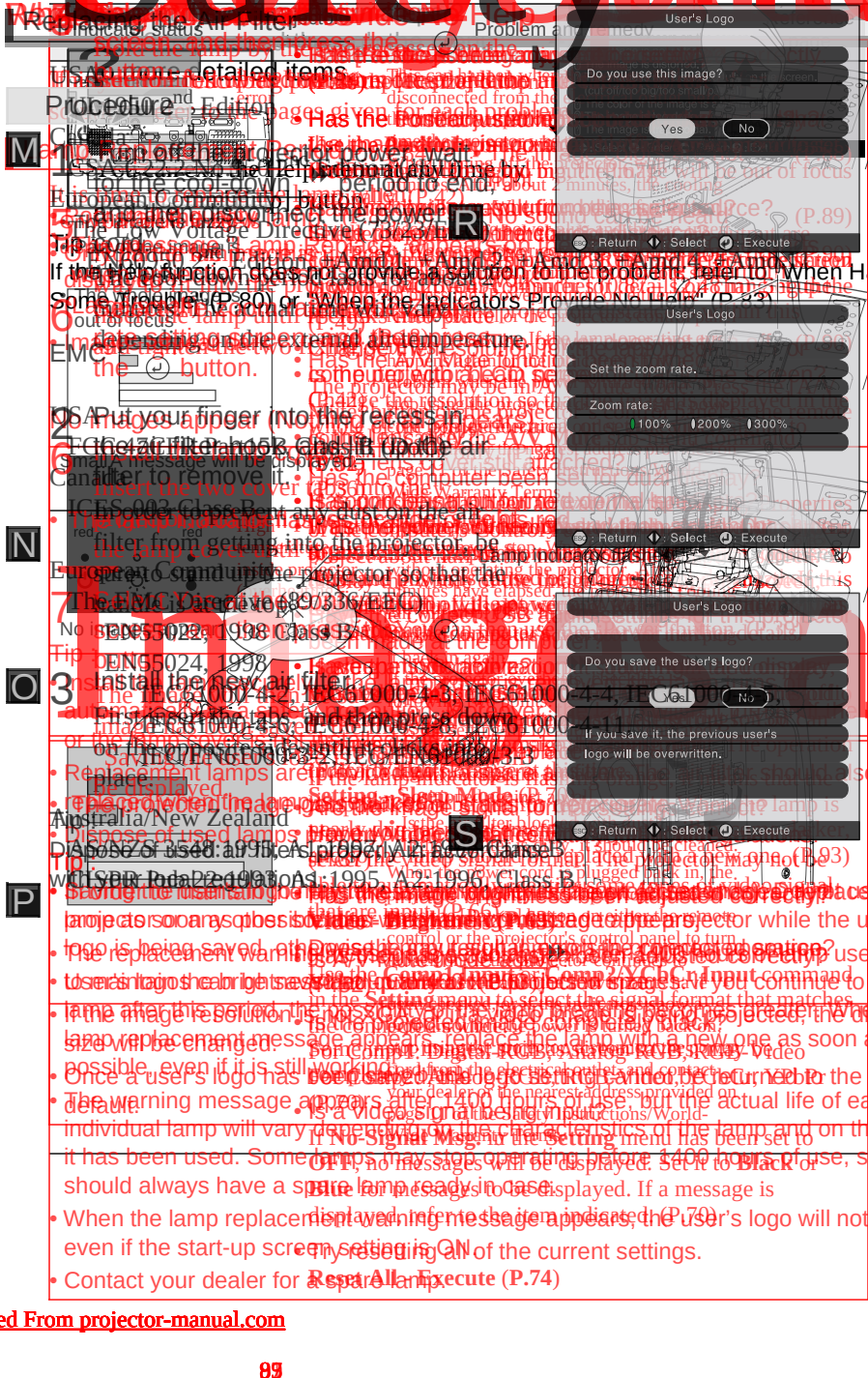
Safety



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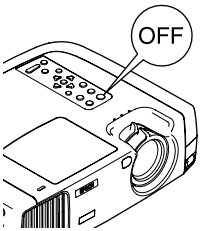
The remote control does not work

- Is the R/C switch on the remote control set to the ON position? (P.14)
- Is the remote control being pointed in the right direction?
  The operating angle for the remote control is approximately ±30° horizontally and approximately ±15° vertically.
- Is the remote control too far from the projector?
  The operating distance for the remote control is approximately 393.7 inches (10 m). (P.14)
- Is the remote control being pointed at the projector when a remote control receiver has been connected?
- Is direct sunlight or strong light from fluorescent lamps shining onto the remote control receiver?
- Are there batteries in the remote control? (P.13)
- Are the batteries dead?
- Have the batteries been inserted correctly? (P.13)
- If the mouse function does not work after connecting a PS/2 mouse, you will need to restart the computer.

The power does not turn off (after the [Power] button is pressed)



- The operation indicator remains orange.
  This projector is designed so that the operation indicator remains lit even when after the power has been turned off. The operation indicator will switch off when the power cord is disconnected from the electrical outlet.
- Cooling fan does not stop.
  After the [Power] button is pressed to turn off the power, the cool-down▸▸ period starts. (During this time, the lamp is cooling down and the operation indicator flashes orange).
  After this, the operation indicator changes to a steady orange, and you can then disconnect the power cord from the electrical outlet.

* The cool-down period lasts for about 2 minutes. The actual time will vary depending on the external air temperature.

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Buttons

Clean the cabinet periodically with a soft cloth.

Clean the Projector Case

Clean the projector case by wiping it gently with a soft cloth.

If the projector is particularly dirty, moisten the cloth with water containing a small amount of neutral detergent, and then firmly wring the cloth dry before using it to wipe the projector case. Then wipe the case again with a soft, dry cloth.

Caution :

Do not use volatile substances such as wax, alcohol, or thinner to clean the projector case. These can cause the case to warp and make the coating finish peel off.

Cleaning the Lens

Use a commercially-available air blower, or use a lens cleaning paper to gently wipe the lens.

Caution :

Do not rub the lens with harsh materials or subject the lens to shocks, as it can easily become damaged.

Communication protocol

- Virtual (window) display
- Standard baud rate : 9600 bps
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Flow control : None

See "Appendix: Optional Accessories" (P.100)

General Terms

Signal	Refresh rate (Hz)	Resolution (dots)	Resolutions for resized display (resizing ON) (dots)	Resolutions for normal display (resizing OFF) (dots)
			13w3 cable	
			EMP-810/800	EMP-600
			13w3 connector	
			SDNC connector	
			A/V cable	
			A/V mute function	
			About menu	
			Audio connector	
			Audio input	
			Audio Out connector	
			Automatic adjustment	
			Auto Setup	
			Background	
			Bar	
			Bass	
			Battery	
			Brightness	

Troubleshooting

Before requesting repairs, refer to the following table to check the symptoms and take the corrective measures we suggest. If the problem persists, contact your dealer.

Troubleshooting List

Problem	Cause and Solution	Reference page
No power.	Is the power cord connected properly?	12, 26
	Is the power cord used to unplug the projector?	25
	Is the [Power] button on the projector or on the remote control pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed immediately after the lamp was turned off?	23
	Is the [Power] button on the projector or on the remote control pressed immediately after the lamp was turned on?	23
	Is the lamp cover attached properly?	22
	Is the lamp reaching the end of its service life?	22
	Is the temperature inside the projector too high?	24
	Is the air filter clogged with dust?	24
	Is the [Power] button on the projector or on the remote control pressed while the [Freeze] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [A/V Mute] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Auto] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Esc] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Enter] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Menu] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Help] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Keystone] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Left] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Right] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Source] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Sync.] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Tracking] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Volume] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Color] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Freeze] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Preset] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Resize] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Shift] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [S-Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [P in P] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Component] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Comp1/YCbCr] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Comp2/YCbCr] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Component] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Esc] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [E-Zoom] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Freeze] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Help] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Keystone] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Left] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Menu] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [P in P] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Power] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Preset] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Resize] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Right] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Shift] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [S-Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Source] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Sync.] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Tracking] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Volume] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Color] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Freeze] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Preset] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Resize] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Right] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Shift] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [S-Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Source] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Sync.] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Tracking] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Volume] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Color] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Freeze] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Preset] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Resize] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Right] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Shift] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [S-Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Source] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Sync.] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Tracking] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Volume] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Color] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Freeze] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Preset] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Resize] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Right] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Shift] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [S-Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Source] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Sync.] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Tracking] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Volume] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Color] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Freeze] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Preset] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Resize] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Right] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Shift] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [S-Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Source] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Sync.] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Tracking] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Volume] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Color] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Freeze] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Preset] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Resize] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Right] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Shift] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [S-Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Source] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Sync.] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Tracking] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Video] button is pressed?	12, 26
	Is the [Power] button on the projector or on the remote control pressed while the [Volume] button is pressed?	12, 26

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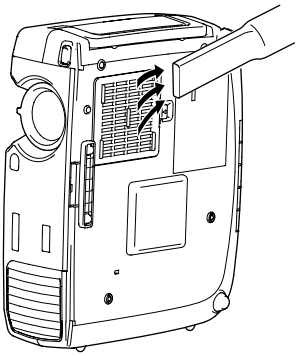
Cleaning the Air Filter

If the air filter becomes clogged with dust, it can cause overheating and damage the projector.
Stand up the projector in order to prevent dust getting inside the projector, and then use a vacuum cleaner to clean away the dust from the air filter.



Tip :

- *If the air filter is difficult to clean or if it is broken, it should be replaced. Contact your dealer for a spare air filter.*
- *Replacement lamps are provided with a spare air filter. The air filter should also be replaced when the lamp is replaced.*

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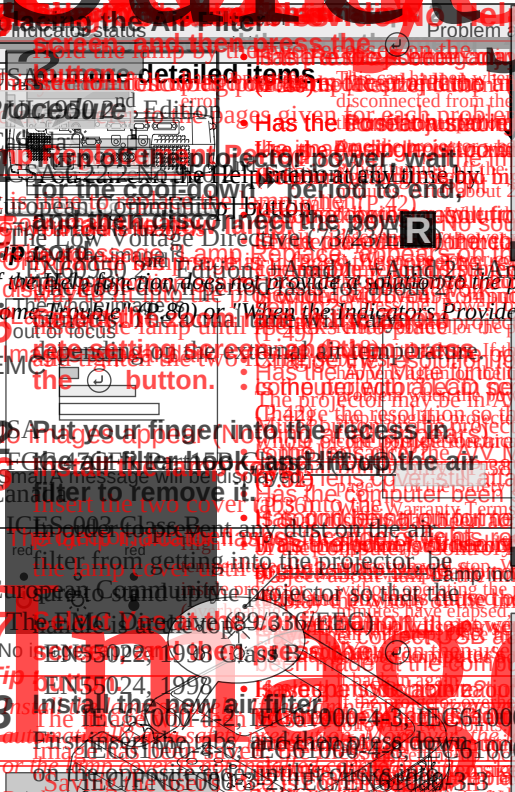
Safety guide

Replacing the Air Filter

Procedure

1. Turn off the projector power, wait for the cool-down period to end, and then disconnect the power plug from the outlet.
2. Put your finger into the recess in the air filter holder and pull up the air filter to remove it.
3. Install the new air filter.



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Replacing the Lamp

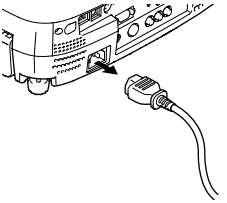
Caution :

If the lamp stops working and needs to be replaced, there is the danger that the lamp may break when handled.
If replacing the lamp of a projector which has been installed to the ceiling, you should always assume that the lamp is broken and handle it with extreme care during removal.
Furthermore, you should stand to the side of the projector, not underneath it.

Procedure

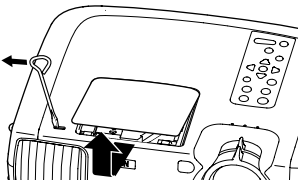
1 **Turn off the projector power, wait for the cool-down period to end, and then disconnect the power cord.**

The cool-down period lasts for about 2 minutes. The actual time will vary depending on the external air temperature.



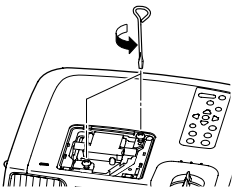
2 **Wait until the lamp has cooled down, and then remove the lamp cover.**

It takes approximately 30 minutes for the lamp to cool down by itself.
Use the screwdriver that is provided with the replacement lamp to slide the lamp cover opening switch so that the lamp cover lifts up. Hold the raised section of the lamp cover and then slide it forward to remove it from the projector.



3 **Loosen the two lamp fixing screws.**

Use the screwdriver that is supplied with the replacement lamp to loosen the two lamp fixing screws that are securing the lamp to the projector.



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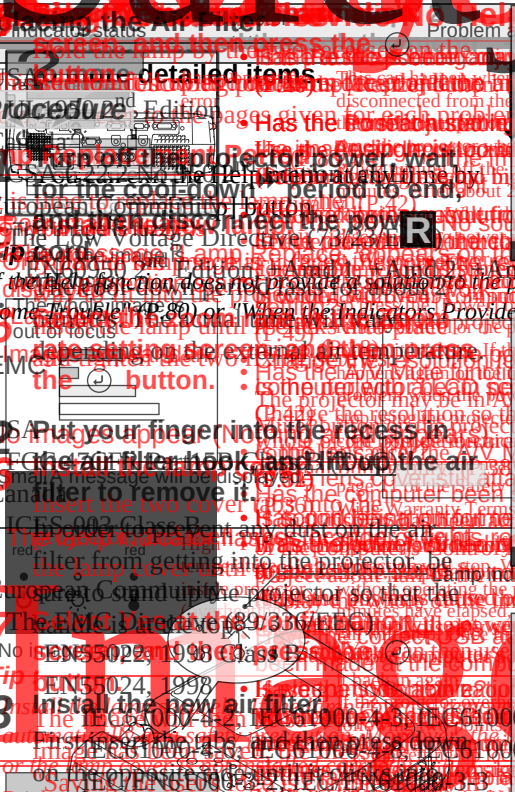
Safety guide

Replacing the Air Filter

Procedure

1. Turn off the projector power, wait for the cool-down period to end, and then disconnect the power plug from the outlet.
2. Put your finger into the recess in the air filter holder and pull up the air filter to remove it.
3. Install the new air filter.



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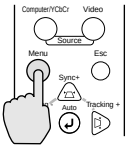
Resetting the Lamp Operating Time

The projector has a built-in counter which keeps track of the lamp operating time. When the cumulative operating time reaches a certain point, it causes the replacement warning message to be displayed. Therefore, the counter needs to be reset after the lamp has been replaced with a new one. You can do this using the projector menu.

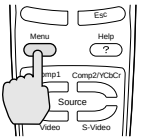
Procedure

1 **Press the [Menu] button on either the remote control or the projector's control panel.**

The Main menu will be displayed.

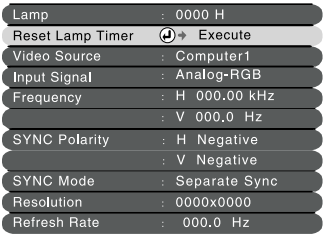


Projector



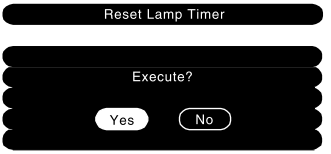
Remote control

2 **Select Reset Lamp Timer from the About menu and then press the ↵ button.**


Lamp : 0000 H
Reset Lamp Timer ↵ Execute
Video Source : Computer1
Input Signal : Analog-RGB
Frequency : H 000.00 kHz
: V 000.0 Hz
SYNC Polarity : H Negative
: V Negative
SYNC Mode : Separate Sync
Resolution : 0000x0000
Refresh Rate : 000.0 Hz

3 **Select Yes and then press the ↵ button.**

The lamp operating time will then be reset.



Tip :

Do not reset the lamp operating time except after the lamp has been replaced, otherwise the lamp replacement period will not be indicated correctly.

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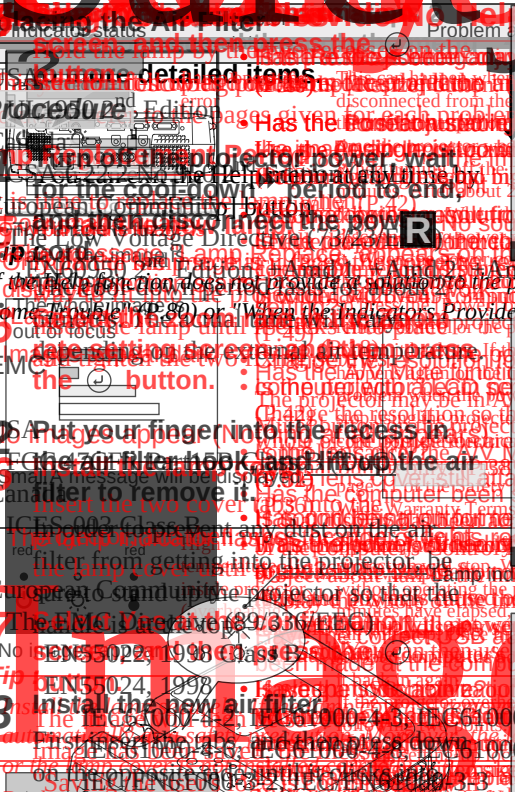
Safety guide

Replacing the Air Filter

Procedure

1. Turn off the projector power, wait for the cool-down period to end, and then disconnect the power plug from the outlet.
2. Put your finger into the recess in the air filter holder and pull up the air filter to remove it.
3. Install the new air filter.



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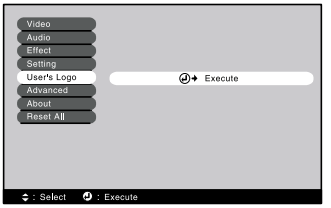
Saving a User's Logo

You can record the image that is currently being projected as a user's logo.

Procedure

1 **Project the image that you would like to use as a user's logo, and then press the [Menu] button on the projector's control panel or the remote control.**

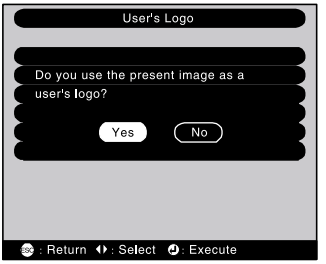
2 **Select the User's Logo menu, and then press the ↵ button.**



Tip :

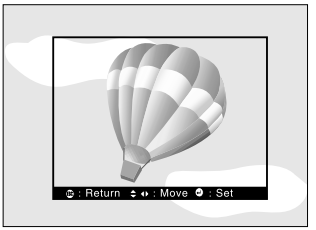
*If keystone correction has been carried out, it will be canceled when the **User's Logo** menu is selected.*

3 **Select Yes in the sub-menu, and then press the ↵ button.**



4 **The image to be recorded and a selection marquee box will be displayed. Move the marquee box to select the part of the image to use.**

Tilt the ↵ button on the remote control to select the part of the image to use as the user's logo, and then press the ↵ button.



Tip :

If the video signal being input is a YCbCr or YPbPr signal, the selection marquee box can only be moved around the middle of the image.

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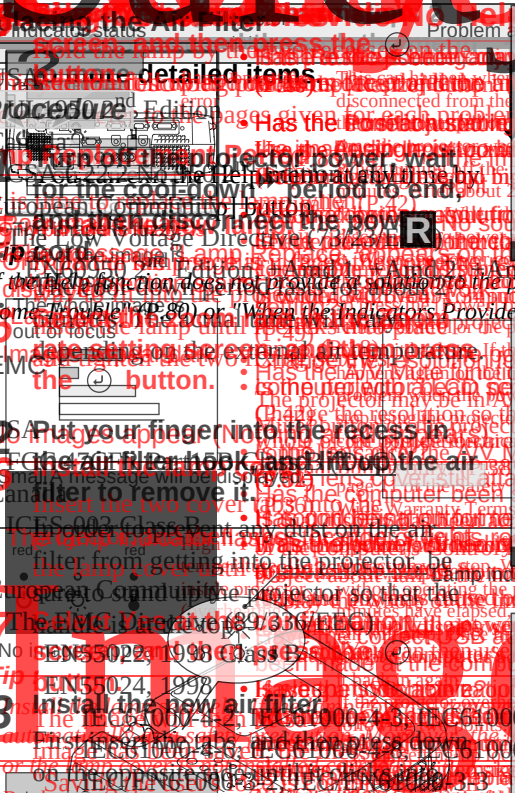
Safety guide

Replacing the Air Filter

Procedure

1. Turn off the projector power, wait for the cool-down period to end, and then disconnect the power plug from the outlet.
2. Put your finger into the recess in the air filter holder and pull up the air filter to remove it.
3. Install the new air filter.



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Optional Accessories

The following optional accessories are available for purchase if required. This list of optional accessories is current as of June 2001. Details of accessories are subject to change without notice.

Hard travel case	ELPKS26
Soft carrying case	ELPKS27
Use this case if you need to carry the projector by hand.	
Spare lamp	ELPLP15
Use as a replacement for spent lamps.	
Portable screen (50 inch)	ELPSC06
A compact screen which can be carried easily.	
60 inch screen	ELPSC07
80 inch screen	ELPSC08
Mac adapter set	ELPAP01
Use to connect the projector to a Macintosh computer when the accessory or optional computer cables cannot be used because the connector shapes are different.	
Computer cable (6 ft (1.8 m) - for mini D-Sub 15-pin/mini D-Sub 15-pin)	ELPKC02
Use to connect the projector to a computer when you would like to use UXGA display resolution.	
Computer cable (9.8 ft (3 m) - for mini D-Sub 15-pin/mini D-Sub 15-pin)	ELPKC09
Computer cable (65.6 ft (20 m) - for mini D-Sub 15-pin/mini D-Sub 15-pin)	ELPKC10
Use this extension cable if the accessory computer cable is too short.	
Computer cable (6 ft (1.8 m) - for mini D-Sub 15-pin/5BNC)	ELPKC11
Use to connect the projector to a workstation.	

Digital video cable (9.8 ft (3 m) - DVI-D male-male)	ELPKC20
DVI cable for connecting the projector to a computer with a digital RGB output interface.	
Digital video cable (9.8 ft (3 m) - for DVI-D/DFP 20-pin)	ELPKC21
DFP cable for connecting the projector to a computer with a digital RGB output interface.	
DVI analog cable (9.8 ft (3 m) - for DVI-I/mini D-Sub 15-pin)	ELPKC25
Use to connect the projector to connect two computers with analog RGB output to the projector.	
Component video cable (9.8 ft (3 m) - for mini D-Sub 15-pin/RCA x 3)	ELPKC19
Use to connect a component video source.	
Remote control receiver	ELPST04
Use to control the projector with the remote control from a distance.	
Ceiling mount *	ELPMB07
Use when installing the projector to a ceiling.	
Ceiling plate *	ELPFC03
Pipe 370 (14.57 inches (370 mm)/silver)*	ELPFP04
Pipe 570 (22.44 inches (570 mm)/silver)*	ELPFP05
Pipe 770 (30.31 inches (770 mm)/silver)*	ELPFP06
Use when installing the projector to a high ceiling or a ceiling with veneer panels.	
Image presentation camera	ELPDC02 ELPDC03
Use when projecting books, OHP films and slides.	

* A special method of installation is required in order to suspend the projector from the ceiling. Please contact the place of purchase if you would like to use this installation method.

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Buttons

Cleaning

Cleaning the Projector Case

Cleaning the Lens

Communication protocol

General Terms

Signal	Refresh rate ▸▸ Resolution
(Enter) button	(Hz) (dots)
[ ] buttons	12, 26
[1]/[2] [3] (Effect) buttons	12, 26
[Auto] button	45
[A/V Mute] button	13, 28
[Comp1/RGB] button	12, 38
[Comp2/YCbCr] button	12, 38
[Esc] button	12, 38
[E-Zoom +/-] button	12, 38
[Freeze] button	12, 38
[Help] button	12, 38
[Keystone] button	12, 38
[Left] button	12, 38
[Menu] button	12, 38
[P in P] button	12, 38
[Power] button	12, 38
[Preset] button *2	12, 38
[Resize] button	12, 38
[Right]/[Esc] button	12, 38
[Shift] button	12, 38
[S-Video] button	12, 38
[Source] button	12, 38
[Sync] button	12, 38
[Tracking] button	12, 38
[Video] button	12, 38
[Volume] button	12, 38
1080/24p	60
1080/50i	60
1080/60i	60
1125i (1080/60i)	60
1125i (1080/60i), 1250i (1080/50i)	60
1125i, 1125p	60
16:9	60
4:3	60
480/60i	60
480/60p	60
576/50i	60
576/50p	60
720/24p	60
720/50p	60
720/60p	60
750/50p	60
750/60p	60
875/60i	60
875/60p	60
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Audio connector	10, 34, 106
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Digital cinema 4K (4096x2160)

Interlaced scanning	A method of image scanning whereby the signal bandwidth used is approximately half that required for sequential scanning when images with the same still picture resolution are broadcast.
Refresh Rate	The light-emitting element of a display maintains the same luminosity and color for an extremely short time. Because of this, the image must be scanned many times per second in order to refresh the light emitting element. The number of refresh operations per second is called the "refresh rate", and is expressed in hertz (Hz).
Remote port	Connects an optional remote control receiver.
S-Video images	A video signal which has the luminance component and color component separated in order to provide better image quality. It refers to images which consist of two independent signals: Y (luminance signal), and C (color signal).
SDTV	An abbreviation for Standard Definition Television. It refers to standard television systems which do not satisfy the conditions for High-Definition Television.
Security lock	A device consisting of a protector case with a hole in it that a commercially-available theft-prevention cable can be passed through in order to secure the device to a table or pillar. This projector is compatible with the Microsaver Security System manufactured by Kensington.
Source prompt	The screen display showing the type of signal being input.
sRGB	An international standard for color intervals that was formulated so that colors which are reproduced by video equipment can be handled easily by computer operating systems (OS) and the Internet.
SVGA	A type of video signal with a resolution of 800 (horizontal) x 600 (vertical) dots which is used by IBM PC/AT-compatible computers (DOS/V computers).
SXGA	A type of video signal with a resolution of 1,280 (horizontal) x 1,024 (vertical) dots which is used by IBM PC/AT-compatible computers (DOS/V computers).
Synchronization (Sync.)	The signals output from computers have a specific frequency. If the projector frequency does not match this frequency, the resulting images will not be of a good quality. The process of matching the phases of these signals (the relative position of the crests and troughs in the signal) is called "synchronization". If the signals are not synchronized, problems such as flickering, blurriness and horizontal interference can occur.
Tracking	The signals output from computers have a specific frequency. If the projector frequency does not match this frequency, the resulting images will not be of a good quality. The process of matching the frequency of these signals (the number of crests in the signal) is called “tracking”. If tracking is not carried out correctly, wide vertical stripes will appear in the projected images.
USB	An abbreviation for Universal Serial Bus. USB is an interface for connecting personal computers to peripheral devices which only support relatively low data transmission speeds.
UXGA	A type of video signal with a resolution of 1,600 (horizontal) x 1,200 (vertical) dots which is used by IBM PC/AT-compatible computers (DOS/V computers).
VGA	A type of video signal with a resolution of 640 (horizontal) x 480 (vertical) dots which is used by IBM PC/AT-compatible computers (DOS/V computers).
XGA	A type of video signal with a resolution of 1,024 (horizontal) x 768 (vertical) dots which is used by IBM PC/AT-compatible computers (DOS/V computers).
YCbCr	The carrier signal which is contained in the color bar signal used in modern TV transmissions (NTSC format). The name comes from the Y (luminance) signal and the CbCr (chroma [color]) signals.
YPbPr	The carrier signal which is contained in the color bar signal used in high-definition TV (HDTV) transmissions. The name comes from the Y (luminance) signal and the PbPr (color difference) signals.

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Buttons

Cleaning

Cleaning the Projector Case

Cleaning the Lens

Communication protocol

General Terms

Signal	Refresh rate ▸▸ Resolution
(Enter) button	(Hz) (dots)
[ ] buttons	12, 26
[1]/[2] [3] (Effect) buttons	12, 26
[Auto] button	45
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[Comp1/RGB] button	12, 38
[Comp2/YCbCr] button	12, 38
[Esc] button	12, 38
[E-Zoom +/-] button	12, 38
[Freeze] button	12, 38
[Help] button	12, 38
[Keystone] button	12, 38
[Left] button	12, 38
[Menu] button	12, 38
[P in P] button	12, 38
[Power] button	12, 38
[Preset] button *2	12, 38
[Resize] button	12, 38
[Right]/[Esc] button	12, 38
[Shift] button	12, 38
[S-Video] button	12, 38
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[Video] button	12, 38
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1080/24p	60
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1080/60i	60
1125i (1080/60i)	60
1125i (1080/60i), 1250i (1080/50i)	60
1125i, 1125p	60
16:9	60
4:3	60
480/60i	60
480/60p	60
576/50i	60
576/50p	60
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720/50p	60
720/60p	60
750/50p	60
750/60p	60
875/60i	60
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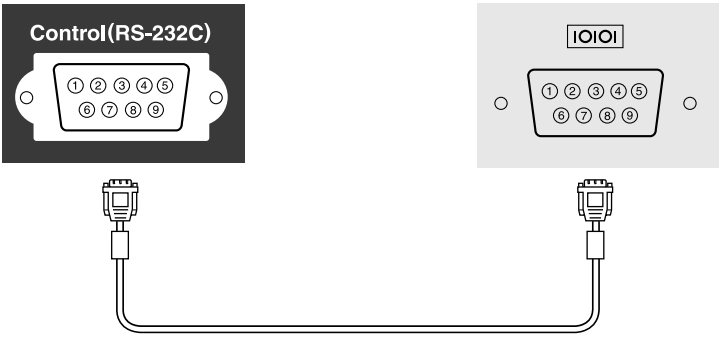
Digital cinema 4K (4096x2160)

Cable layouts

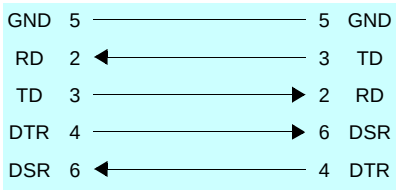
Serial connection

- Connector shape : D-sub 9 pin (male)
- Projector input connector : Control (RS-232C)

<At projector> <At computer>



<At projector> (PC serial cable) <At computer>

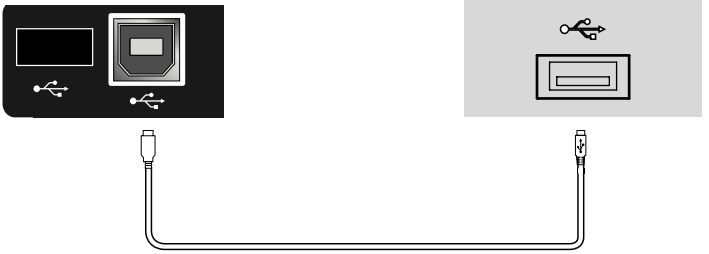


Signal	Function
GND	Signal wire ground
TD	Transmit data
RD	Receive data
DSR	Data set ready
DTR	Data terminal ready

USB connection

- Connector shape : USB (type B)

<At projector> <At computer>



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Buttons

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Cleaning the Lens

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Signal	Refresh rate ▸▸ Resolution
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1125i, 1125p	60
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Digital cinema 4K (4096x2160)

Specifications

Product name	Multimedia projector EMP-810/800/600		
Dimensions	13.7 (W) x 4.09 (H) x 10.79 (D) inches (348 (W) x 104 (H) x 274 (D) mm) (not including feet)		
Panel size	0.9 inches		
Display method	Polysilicon TFT active matrix		
Drive method	Full-line 12-phase block sequential writing		
Resolution	EMP-810/800 : XGA 786,432 pixels (1024 (W) x 768 (H) dots) x 3 EMP-600 : SVGA 480,000 pixels (800 (W) x 600 (H) dots) x 3		
Focus adjustment	Manual		
Zoom adjustment	Manual (approx. 1:1.35)		
Lamp (light source)	UHE lamp, 200 W, Model No.: ELPLP15		
Max. audio output	5W monaural		
Speaker	1		
Power supply	100 – 120 VAC, 3.1A 200 – 240 VAC, 1.5A 50/60 Hz		
Operating temperature	41°F – 95°F (+5°C – +35°C) (No condensation)		
Storage temperature	14°F – 140°F (-10°C – +60°C) (No condensation)		
Weight	Approx. 9.3 lbs (4.2 kg)		
Connectors	Computer 1:	1	DVI-I
	Computer 2/ Component Video:	1	Mini D-Sub 15-pin (female)
	Audio 1:	1	Stereo mini jack
	Audio Out:	1	Stereo mini jack
	Video:	1	RCA pin jack
	S-Video:	1	Mini DIN 4-pin
	Audio 2:	1	RCA pin jack x 2 (L, R)
	Mouse:	1	DIN jack 9-pin
	USB:	2	USB connectors (A/B series)
	Control (RS-232C):	1	D-Sub 9-pin (male)
	Monitor Out:	1	Mini D-Sub 15-pin (female)
	Remote:	1	Stereo mini jack

* The USB connector is not guaranteed to operate correctly with all USB-compatible devices.

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Safety

Replacing the Air Filter

Use the detailed items in the procedure below to replace the air filter.

1 Turn off the projector and disconnect the power cable.

Make sure that the cooling fans have stopped completely before proceeding. Allow the projector to cool down for at least 5 minutes.

2 Put your finger into the recess in the air filter hook, and then pull the filter out of the projector.

3 Install the new air filter.

First insert the tabs, and then press down on the filter.

Disposal of used air filters

Dispose of used air filters properly in accordance with your local regulations.

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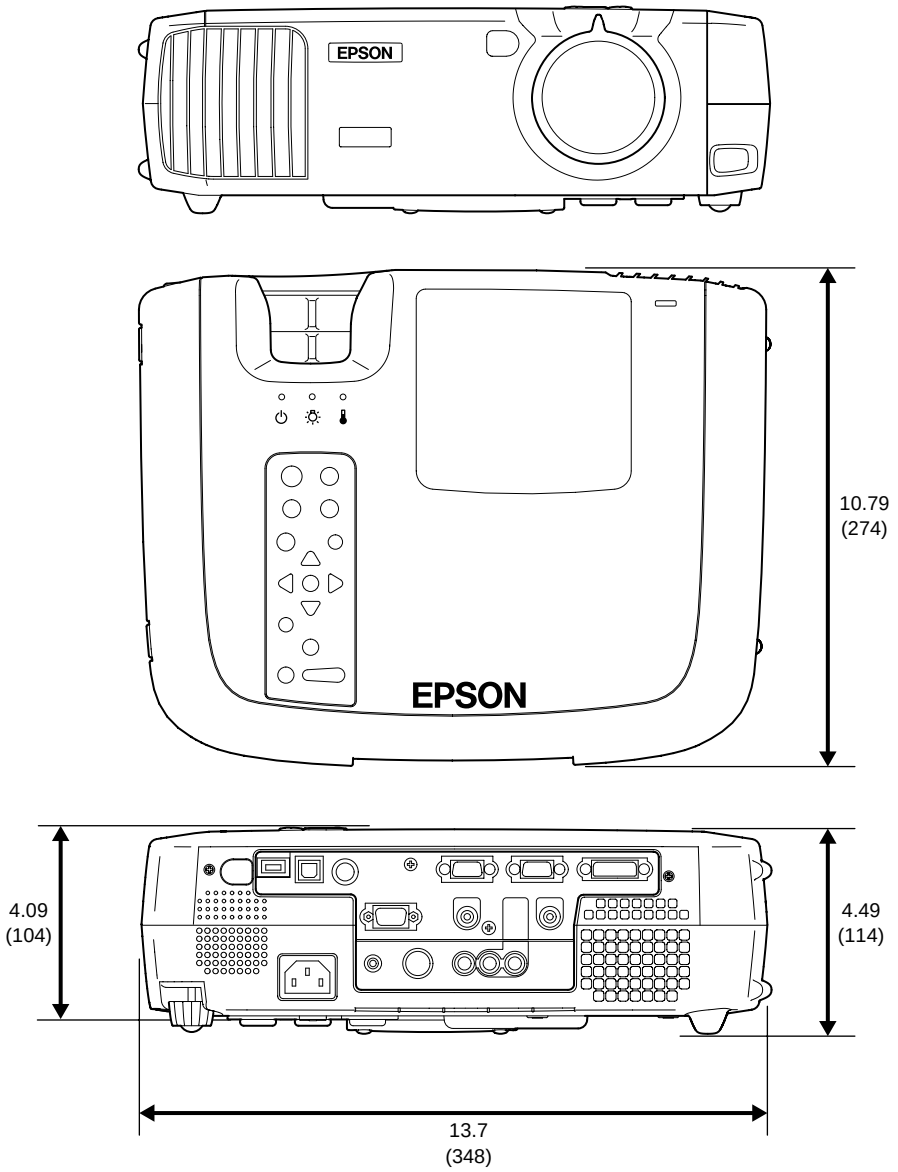
Appearance



Units: inch (mm)

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Cleaning

Be sure to read the separate "Safety Instructions/World Wide Warranty" manual for details on safe handling of the projector during cleaning.

Cleaning the Projector Case

Clean the projector case by wiping it gently with a soft cloth.

If the projector is particularly dirty, moisten the cloth with water containing a small amount of neutral detergent, and then firmly wring the cloth dry before using it to wipe the projector case. Then wipe the case again with a soft, dry cloth.

Caution :

Do not use volatile substances such as wax, alcohol or thinner to clean the projector case. These can cause the case to warp and make the coating finish peel off.

Cleaning the Lens

Use a commercially-available air blower, or use a lens cleaning paper to gently wipe the lens.

Caution :

Do not rub the lens with harsh materials or subject the lens to shocks as it can easily become damaged.

Communication protocol

• Virtual (window) display
• Standard baud rate
• Data length
• Parity
• Stop bit
• Flow control

See "Appendix: Optional Accessories" (P.100)

*1 Connection is not possible if the equipment does not have a VGA output port.
*2 The EMP-600 is not compatible with this.
*3 The EMP-810/800 can only handle UXGA display resolutions when the optional computer cable is being used. Use the accessory computer cable for connections.

General Terms

A

An abbreviation for High-Definition Television. It refers to high-definition systems which satisfy the following conditions:
(P = progressive scanning, i = interlaced scanning)
Screen Aspect Ratio of 16:9

B

Bar
Bass
Battery Compartment Cover
Brightness

C

Cleaning

Resolutions for resized display (resizing ON) (dots) 13w3 cable EMP-810/800 13w3 connector 1024x768 1024x576 1024x480 1280x720 1920x1080 1024x576 1024x480 Resolutions for normal display (resizing OFF) (dots) EMP-600 800x600 800x500 800x450 800x600 800x500 800x450 1600x1200 1280x1024 1280x960 1280x800 1280x768 1280x720 1152x864 1024x768 1024x640 1024x576 1024x480 800x600 800x500 800x450 640x480 640x400 640x350 640x480 640x400 640x350 Refresh rate▸▸ Signal (Hz) Resolution (dots) 12, 26 PC98 640x400 [1] button 12, 26 [1]/[2] button 12, 26 [Auto] button 12, 26 [A/V Mute] button 12, 26 [Comp1/YCbCr] button 12, 26 [Comp2/YCbCr] button 12, 26 [Esc] button 12, 26 [E-Zoom +/-] button 12, 26 [Freeze] button 12, 26 [Help] button 12, 26 [Keystone] button 12, 26 [Left] button 12, 26 [Menu] button 12, 26 [P in P] button 12, 26 [Power] button 12, 26 [Preset] button 12, 26 [Resize] button 12, 26 [Right]/[Esc] button 12, 26 [Shift] button 12, 26 [S-Video] button 12, 26 [Source] button 12, 26 [Sync] button 12, 26 [Tracking] button 12, 26 [Video] button 12, 26 [Volume] button 12, 26 (Enter) button 12, 26 (Menu) button 12, 26 Buttons 12, 26 Cleaning 12, 26 Control panel 12, 26 Remote control 12, 26 Cleaning 12, 26 Communication protocol 12, 26 Connecting 12, 26 Connecting to a computer 12, 26 Connecting to a VCR 12, 26 Connecting to AV equipment 12, 26 Connecting to video equipment 12, 26 Connecting to video equipment (component video) 12, 26 Connecting to video equipment (S-Video) 12, 26 Connecting to video equipment (video) 12, 26 Connecting to video equipment (video) 12, 26 Connecting to video equipment (

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Safety guide

Replacing the Air Filter

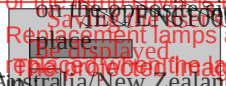
Procedure

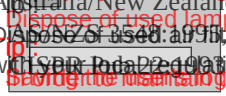
1 Turn off the projector power, wait for the cool-down period to end, and then disconnect the power cord.

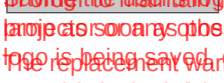
2 Put your finger into the recess in the air filter hook, and lift up the air filter to remove it.

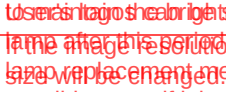
3 Install the new air filter.

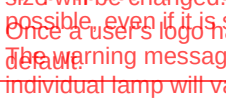
First insert the tabs, and then press down.

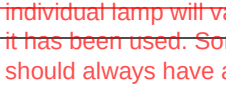


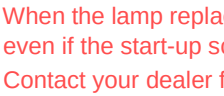


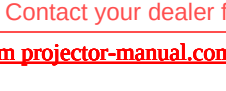


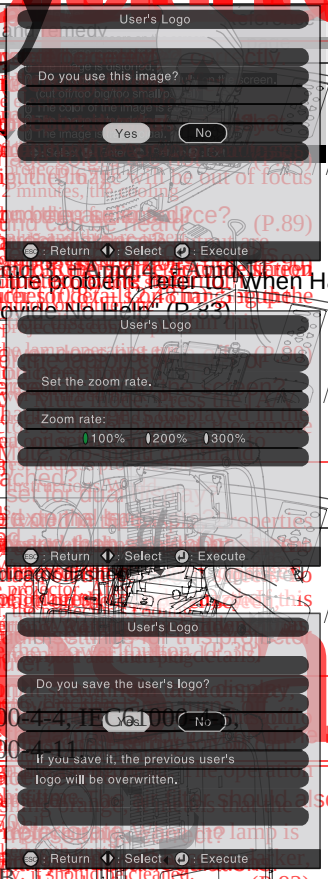












If the Help function does not provide a solution to the problem, refer to "When Having Some Trouble" (P.80) or "When the Indicators Provide No Help" (P.82).

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FCC Compliance Statement
For United States Users

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification or Declaration of this device and may cause interference levels which exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity for Products Marked the FCC Logo (United States only)

For questions regarding your product, contact:

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MS 3-13
3840 Kilroy Airport Way
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Telephone: 562-290-5254

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